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No. _____

Supreme Court, U.S.
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In The

Supreme Court of the United States

October Term, 1990

STATE OF COLORADO,

Petitioner,

v.

IDARADO MINING CO. et al.,

Respondents.

Petition For Writ Of Certiorari To The United States Court Of Appeals For The Tenth Circuit

PETITION FOR WRIT OF CERTIORARI

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QUESTION PRESENTED FOR REVIEW

Section 121(e)(2) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 as amended ("CERCLA"), 42 U.S.C. § 9621(e)(2) (1988), grants states the power to enforce federal or state requirements to which a remedial action is required to conform under CERCLA in United States District Court. Does § 121(e)(2) authorize a district court to grant injunctive relief to a state with respect to a state-selected remedial action that has been approved by that court?

LIST OF PARTIES

Petitioner is the State of Colorado.

Respondents are Idarado Mining Company; Newmont Services, Ltd.; and Newmont Mining Corporation.

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Petitioner State of Colorado ("Colorado") respectfully petitions for a writ of certiorari to review the October 11, 1990, judgment and opinion of the United States Court of Appeals for the Tenth Circuit in this case.

OPINIONS BELOW

The opinion of the Court of Appeals for the Tenth Circuit is reported at 916 F.2d 1486 and is attached hereto as Appendix A. The opinion of the United States District Court for the District of Colorado is reported at 707 F. Supp. 1227 and is attached hereto as Appendix B.

JURISDICTIONAL STATEMENT

The judgment and opinion of the Tenth Circuit was entered on October 11, 1990. The Tenth Circuit entered an order denying Colorado's timely filed petition for rehearing on November 21, 1990 (attached hereto as Appendix C). The jurisdiction of this Court to review the judgment and opinion of the Tenth Circuit is invoked pursuant to 28 U.S.C. § 1254(1) (1988).

STATUTORY AND REGULATORY PROVISIONS INVOLVED

The statutory provision at issue in this case is the first sentence of CERCLA § 121(e)(2), 42 U.S.C. § 9621(e)(2) (1988), which provides that "[a] State may

enforce any federal or state standard, requirement, criteria, or limitation to which the remedial action is required to conform under this chapter [CERCLA] in the United States district court for the district in which the facility is located."

In construing this provision, Colorado's petition discusses and relies upon other provisions of CERCLA and provisions in CERCLA's implementing regulations contained in the National Oil and Hazardous Substances Pollution Contingency Plan ("NCP"), 40 C.F.R. pt. 300. These provisions, attached hereto as Appendix D, are: 42 U.S.C. § 9601(24) (1988); 42 U.S.C. § 9606(a) (1988); 42 U.S.C. § 9607(a) and (f)(1) (1988); 42 U.S.C. § 9613(g)(2) (1988); 42 U.S.C. § 9621 (1988); 40 C.F.R. § 300.68(i)(1) (1989); 40 C.F.R. § 300.71(a) (1989); 55 Fed. Reg. 8666, 8850-51 (1990) (to be codified at 40 C.F.R. § 300.430(f)(1) (1990)).

STATEMENT OF THE CASE

CERCLA is a comprehensive environmental cleanup statute which authorizes the federal government and states to take certain actions with respect to releases of hazardous substances into the environment. CERCLA § 107(a) and (f), 42 U.S.C. § 9607(a) and (f) (1988), delineates two basic types of federal and state governmental authority: actions to recover all cleanup costs ("costs of removal or remedial action") not inconsistent with the NCP, and actions to recover damages for injury to natural resources.

Colorado filed the present lawsuit in 1983 against respondents (hereinafter collectively referred to as "Idarado") pursuant to CERCLA § 107(a) and (f) to recover damages for injury to natural resources with respect to releases from the 16.5 square mile Idarado mine facility located in southwestern Colorado. Colorado later amended its complaint to seek a declaratory judgment holding Idarado liable pursuant to CERCLA § 107(a) for all of Colorado's costs of removal or remedial action not inconsistent with the NCP.[1] The jurisdiction of the district court was invoked pursuant to 42 U.S.C. § 9613(b) (1988), 28 U.S.C. § 1331 (1988), and 28 U.S.C. § 2201 (1988).

CERCLA provides for two kinds of cleanup actions. Removal actions generally are temporary actions taken to expeditiously respond to releases of hazardous substances, and remedial actions are comprehensive cleanups undertaken after detailed investigations and analyses. *See* 42 U.S.C. §§ 9601(23)-(25), 9621(a)-(b) (1988). The present case involves a remedial action selected by Colorado.

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[1] Colorado relied upon the Federal Declaratory Judgment Act, 28 U.S.C. § 2201 (1988), as the basis for its declaratory judgment claim. Congress subsequently enacted CERCLA § 113(g)(2), 42 U.S.C. § 9613(g)(2) (1988), as part of the October 17, 1986, Superfund Amendments and Reauthorization Act ("SARA") amendments to CERCLA. Pub. L. No. 99-499, 100 Stat. 1613 (1986). Section 113(g)(2) codified the judicially recognized availability of declaratory relief in a § 107(a) action. Prior to trial, Colorado supplemented its pleadings and added § 113(g)(2) as a further basis for seeking the declaratory judgment.

Prior to the selection of a remedial action, a detailed investigation of the nature and extent of contamination (the "remedial investigation") and a detailed analysis of various cleanup alternatives (the "feasibility study") are performed pursuant to the NCP. *See* 40 C.F.R. §§ 300.6 (definitions of feasibility study and remedial investigation), 300.68(d) (1989); 55 Fed. Reg. 8666, 8815 (definition of feasibility study), 8817 (definition of remedial investigation), 8846-50 (1990) (to be codified at 40 C.F.R. §§ 300.5, 300.430(a)(2), (d), (e) (1990)). Both CERCLA and the NCP prescribe certain fundamental requirements for remedial actions, including that they be protective of human health and the environment, be cost effective, and that they attain or exceed applicable or relevant and appropriate requirements ("ARARs") contained in federal and state environmental laws. *See* 42 U.S.C. § 9621(b), (d) (1988); 40 C.F.R. §§ 300.68(i)(1), 300.71(a)(2)(ii)(B) and (a)(4) (1989); 55 Fed. Reg. 8666, 8850 (1990) (to be codified at 40 C.F.R. § 300.430(f)(1)(i)(A) and (ii)(A), (B) and (D) (1990)).

Colorado performed a remedial investigation and a feasibility study for the Idarado site and issued the reports in April and June of 1986, respectively. After taking into account public comments and rebuttal reports from Idarado, Colorado issued the Record of Decision ("ROD") in March 1987 which contained the selected remedial action for the site.

The district court presided over a 26-day nonjury trial in 1987 to determine the appropriate remedial action.[2] Prior to trial, Colorado supplemented its

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[2] The district court bifurcated Colorado's natural resource damages claim prior to trial; this issue still has not been tried.

pleadings to seek an injunction requiring Idarado to perform the selected remedial action pursuant to CERCLA § 121(e)(2), which was enacted as part of the October 1986 SARA amendments to CERCLA.

On February 22, 1989, the district court issued its decision. *Colorado v. Idarado Mining Co.*, 707 F. Supp. 1227 (D. Colo. 1989). The court upheld Colorado's selected remedial action in most respects. The court recognized that the continuing releases of hazardous substances from the Idarado site are causing endangerment and injury to aquatic life, including fish, insects, algae, and plants; the releases contaminate surface and ground water; the releases pose a threat to and have harmed public welfare and the environment; and remedial action is required. Appendix B at App. 48 to App. 53, App. 79 to App. 85, App. 88 to App. 92, App. 101. The court ruled that the appropriate ARARs had been identified and applied to the site as set forth in the ROD; that overall, Colorado's response efforts, which include the ROD and remedial action plan set forth therein, were not inconsistent with the NCP; that, except as modified by the court's order, Colorado had selected the appropriate extent of remedy that was cost-effective and effectively protective of public health and the environment; that, except as modified by the court's order, Colorado's remedial action plan accords with the law and is not arbitrary and capricious; and that Idarado is strictly, and jointly and severally, liable to Colorado for all post-March 31, 1987, remedial action costs incurred and to be incurred in responding to releases at the site as set forth in the ROD as modified by the court's order. *Id.* at App. 116 to App. 117. The court

also "ordered and mandatorily enjoined [Idarado] to conduct the remedial activities as described in the State's Record of Decision, to the extent they are in accordance with this Order. . . . " *Id.* at App. 119 to App. 120. The court relied on CERCLA § 121(e)(2) as the authority for its injunction. *Id.* at App. 34, App. 41.

On November 3, 1989, Idarado appealed the district court's injunction to the Tenth Circuit, which issued its decision on October 11, 1990. *Colorado v. Idarado Mining Co.*, 916 F.2d 1486 (10th Cir. 1990).[3] The Tenth Circuit reversed and remanded with respect to the injunctive authority issue and vacated the district court's injunction. Appendix A at App. 10, App. 32. The Tenth Circuit held that CERCLA § 121(e)(2) does not authorize injunctive relief to Colorado in the circumstances presented. *Id.* at App. 17. The court reasoned that the § 121(e)(2) grant of state authority only covers remedial actions selected by the federal government or its delegates, *id.* at App. 19 to App. 23, and that there are no requirements to which the remedial action selected by Colorado had to conform under CERCLA. *Id.* at App. 23 to App. 26.

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[3] Idarado appealed six issues, *see* Appendix A at App. 9 to App. 10, but the Tenth Circuit only ruled on the two issues "most directly related to the injunctive relief." *Id.* at App. 14; *see also id.* at App. 10. This petition for writ of certiorari only addresses one of the two issues decided by the Tenth Circuit: whether the district court had authority under CERCLA § 121(e)(2) to grant Colorado injunctive relief requiring Idarado to implement the remedial action selected by Colorado, as modified by the court.

REASONS FOR GRANTING THE PETITION

I.

THE ISSUE OF WHETHER CERCLA § 121(e)(2) AUTHORIZES INJUNCTIVE RELIEF TO ENFORCE STATE-SELECTED REMEDIAL ACTIONS IS OF GREAT IMPORTANCE TO COLORADO AND OTHER STATES AND SHOULD BE SETTLED BY THIS COURT.

The ability to require environmental cleanups is an issue of major importance to Colorado and other states. Numerous statutes in virtually every state recognize the broad police power authority of states to act for their citizens by protecting public health and the environment from pollution. The common law quasi-sovereign and public trust doctrines recognize states' broad powers and obligations with respect to the natural resources within their boundaries. These doctrines acknowledge states' interests in preserving all the natural resources within their boundaries regardless of ownership. "[T]he state has an interest independent of and behind the titles of its citizens, in all the earth and air within its domain. It has the last word as to whether its mountains shall be stripped of their forests and its inhabitants shall breath pure air." *Georgia v. Tennessee Copper Co.*, 206 U.S. 230, 237 (1907). Accordingly, a state may bring suit "to protect the atmosphere, the water and the forests within its territory, irrespective of the assent or dissent of the private owners of the land most immediately concerned." *Hudson County Water Co. v. McCarter*, 209 U.S. 349, 355 (1908). *See also Illinois Central Railroad Co. v. Illinois*, 146 U.S. 387, 452-53 (1892) (state powers pursuant to the public trust doctrine).

CERCLA recognizes the states' powers, duties, and interests in these areas. It authorizes and encourages state action to accomplish the cleanup of hazardous substances in order to protect human health and the environment. Congress put the states on the same footing as the federal government in being able to recover all costs of removal and remedial action not inconsistent with the NCP and in being able to recover damages for injury to natural resources. CERCLA § 107(a)(4)(A), (a)(4)(C), and (f)(1). *Compare* CERCLA § 107(a)(4)(B) and (f)(1) (nongovernmental parties are not authorized to recover damages for injury to natural resources, and are limited in their recovery of removal and remedial action costs to any other *necessary* costs of response *consistent* with the NCP). In unduly limiting states' CERCLA cleanup authority, the Tenth Circuit construed CERCLA § 121(e)(2) in a manner contrary to its express language and Congress' intent in passing the statute.

As recognized by CERCLA's legislative history, CERCLA's enactment was necessitated by the massive problem of inactive hazardous waste disposal sites and the inability of then-existing law to address the problem.

> Over the past two decades, the Congress has enacted strong environmental legislation in recognition of the danger to human health and the environment posed by a host of environmental pollutants. This field of environmental legislation has expanded to address newly discovered sources of such danger as the frontiers of medical and scientific knowledge have been broadened.
>
> After having previously focused on air and water pollutants, the Congress, in the Resource

> Conservation and Recovery Act of 1976, provided a prospective cradle-to-grave regulatory regime governing the movement of hazardous waste in our society. Since enactment of that law, a major new source of environmental concern has surfaced: the tragic consequences of improperly, negligently, and recklessly [sic] hazardous waste disposal practices known as the "inactive hazardous waste site problem." The unfortunate human health and environmental consequence of these practices has received national attention amidst growing public and Congressional concern over the magnitude of the problem and the appropriate course of response that should be pursued. Existing law is clearly inadequate to deal with this massive problem.

H.R. Rep. No. 96-1016, 96th Cong., 2d Sess. 17-18, *reprinted in* 1980 U.S. Code Cong. & Admin. News 6119, 6120.

Most state governments do not have the necessary resources or experience to actually perform cleanups of hazardous substances. In order to effectuate Congress' intent that states, as well as the federal government, implement cleanups of hazardous substances under the authority of CERCLA, states need the ability to obtain injunctions ordering polluters to perform the cleanups.

The Tenth Circuit's ruling will have detrimental effects nationwide on the state cleanup role envisioned by CERCLA. Colorado now has a court-approved $42 million cleanup remedy for the Idarado site but no order requiring implementation. In addition, Colorado had intended to rely on § 121(e)(2) with respect to remedial actions at other sites. Other states also are interested in using, or are actually attempting to rely on, § 121(e)(2) to

enforce state-selected remedial actions. The Tenth Circuit decision is the only court decision to rule on states' ability to use § 121(e)(2) to enforce state-selected remedial actions, and thus it will almost certainly be accorded deference by other courts to the detriment of states and the health and environment of their citizens. In fact, the decision already is hindering the attempts of other states to implement state-selected remedial actions. Representatives of two other states in the process of negotiating CERCLA remedial actions with polluters have had the decision thrown in their faces in attempts to limit the extent of cleanup and to question state authority to even negotiate a remedial action agreement.

There are thousands of sites across the country polluted by hazardous substances that, like the Idarado site, are not listed on the CERCLA National Priorities List ("NPL"). *See* Markell & Tuohy, *Some Thoughts on Running a Superfund Enforcement Program: A State Perspective*, Nat'l Envtl. Enforcement J., Nov. 1990, at 3 (of the approximately 28,000 hazardous waste sites in the United States, only 1,200 are listed or proposed to be listed on the NPL). The NCP precludes the federal government from funding remedial actions at non-NPL sites. *See* 40 C.F.R. § 300.66(c)(2) (1989); 55 Fed. Reg. 8666, 8845 (1990) (to be codified at 40 C.F.R. § 300.425(b)(1) (1990)). Allowing the Tenth Circuit decision to stand will unjustifiably and severely restrict a major state enforcement tool provided by Congress and will result in many of the non-NPL sites not being cleaned up. A ruling of this scope which is clearly contrary to congressional intent cries out for Supreme Court review.

II.

THE TENTH CIRCUIT'S UNDULY RESTRICTIVE INTERPRETATION OF CERCLA § 121(e)(2) IGNORES THAT SECTION'S EXPLICIT LANGUAGE AND MISCONSTRUES CERCLA'S STATUTORY SCHEME.

Federal courts of appeals construing CERCLA have consistently applied the well-established canon of statutory construction that remedial statutes and statutes enacted for the public welfare are to be broadly and liberally construed. *See, e.g., United States v. Aceto Agricultural Chemicals Corp.*, 872 F.2d 1373, 1380 (8th Cir. 1989); *Dedham Water Co. v. Cumberland Farms Dairy, Inc.*, 805 F.2d 1074, 1081 (1st Cir. 1986). Courts "are therefore obligated to construe its [CERCLA's] provisions liberally to avoid frustration of the beneficial legislative purposes." *Dedham Water Co.*, 805 F.2d at 1081. Among these beneficial purposes are that hazardous substances be cleaned up so as to protect human health and the environment, that the responsible parties pay for the cleanups, and that states be encouraged to respond to releases of hazardous substances. *See, e.g.*, 42 U.S.C. § 9621(a) and (b) (1988); 42 U.S.C. § 9607(a) (1988); Preamble to CERCLA, Pub. L. No. 96-510, 94 Stat. 2767 (1980); *Walls v. Waste Resource Corp.*, 761 F.2d 311, 318 (6th Cir. 1985); *Ohio ex rel. Brown v. Georgeoff*, 562 F. Supp. 1300, 1316 (N.D. Ohio 1983).

The Tenth Circuit also acknowledged that CERCLA should be broadly and liberally construed, Appendix A at App. 14, but utterly failed to implement this canon of statutory construction. In fact, the court was forced to add limiting language to § 121(e)(2) to supply the basis for its decision. Such judicial lawmaking is improper,

especially when exercised in a manner that frustrates congressional intent behind a remedial statute, and should not be allowed. *See FTC v. Fred Meyer, Inc.*, 390 U.S. 341, 349 (1968) ("we cannot, in the absence of an unmistakable directive, construe the Act in a manner which runs counter to the broad goals which Congress intended it to effectuate").

A. Section 121(e)(2) is not limited to remedial actions selected by the federal government or its delegates.

The Tenth Circuit's ruling that § 121(e)(2) is limited to remedial actions selected by the federal government or its delegates, Appendix A at App. 19 to App. 23, is based on the court adding language that Congress did not provide. The explicit language of § 121(e)(2) authorizes states to enforce all requirements to which *the* remedial action is required to conform under CERCLA, with no reference to federally-selected remedial actions.[4] Other pertinent

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[4] The Tenth Circuit's reliance on *United States v. Akzo Coatings of America, Inc.*, 719 F. Supp. 571 (E.D. Mich. 1989), is misplaced. *See* Appendix A at App. 22. *Akzo* is the only other case that has construed states' injunctive authority under § 121(e)(2). However, it did so in a totally different context than the present case.

In *Akzo*, the court held that the State of Michigan could not use § 121(e)(2) to compel the inclusion of non-selected ARARs into a remedy already chosen by EPA. 719 F. Supp. at 577-78. The holding and reasoning of *Akzo* have no relevance to the present case where the United States is not using its CERCLA authority to clean up the site and there is no EPA remedy. In fact, the *Akzo* decision contains language that strongly supports Colorado's position:

(Continued on following page)

provisions of CERCLA also contradict the court's judicially imposed "federally-selected" limitation. *See, e.g.*, 42 U.S.C. § 9601(24) (1988) (definition of remedial action); 42 U.S.C. § 9607(a)(4)(A) (1988) (a state is authorized to recover for all costs of remedial action incurred by the state that are not inconsistent with the NCP).

In drafting CERCLA § 121, Congress clearly knew how to limit portions of that section to federally-selected remedial actions when it intended to, and explicitly did so in many instances. *See, e.g.*, § 121(a) ("The President shall select appropriate remedial actions . . . "); § 121(b)(1) ("The President shall select a remedial action . . . "); § 121(b)(2) ("The President may select an alternative remedial action . . . "); § 121(c) ("If the President selects a remedial action . . . "); § 121(d)(1) ("Remedial actions selected under this section or otherwise required or agreed to by the President . . . "); § 121(d)(2)(C)(iv) ("Where the remedial action selected by the President . . . "); § 121(f)(2)(A) ("if the President proposes to select a remedial action . . . ").

There is *no* such limiting language in § 121(e)(2), and it is not the courts' role to supply nonexistent statutory language. *See 62 Cases of Jam v. United States*, 340 U.S. 593, 596 (1951) ("our problem is to construe what Congress

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> [T]his section [§ 121(e)(2)] only provides the State with authority to ensure that the relevant parties comply with the remedial action selected for the site. It does not empower the State to require the parties to comply with standards that were not embodied in the remedial action plan.

719 F. Supp. at 578.

has written. After all, Congress expresses its purpose by words. It is for us to ascertain – neither to add nor subtract, neither to delete nor to distort"); *see also Roadway Express, Inc. v. Piper*, 447 U.S. 752, 762 (1980) (reading portions of a statute into a related statute "would constitute standardless judicial lawmaking").

The court partially relied on CERCLA § 106(a), 42 U.S.C. § 9606(a) (1988), for its ruling, concluding that granting states injunctive authority to enforce state-selected remedial actions under § 121(e)(2) is unacceptable because it would give states greater injunctive authority than that enjoyed by the federal government pursuant to § 106(a). Appendix A at App. 18, App. 22. The court reasoned that CERCLA § 106(a) requires the federal government to make a showing of imminent and substantial endangerment to public health or welfare or the environment while § 121(e)(2) imposes no such requirement on states.

However, the court overlooked the definition of remedial action in CERCLA § 101(24), 42 U.S.C. § 9601(24) (1988). Remedial actions are limited to those actions taken "to prevent or minimize the release of hazardous substances so that they do not migrate to cause substantial danger to present or future public health or welfare or the environment." Thus, as a threshold matter, a remedial action can only be undertaken if necessary to mitigate or prevent substantial danger to public health, public welfare, or the environment. And, after meeting this threshold requirement, under CERCLA §§ 121(e)(2), 107(a)(4)(A), and 113(g)(2) a state is entitled to an injunction to enforce a state-selected remedial action *only* if it selects the remedial action in a manner not inconsistent

with the NCP and the appropriate federal district court approves the remedial plan (with or without modifications) in a declaratory judgment action. The federal government, on the other hand, does not even have to go through the rigorous steps of selecting a remedial action in order to get an injunction under CERCLA § 106(a): it merely has to show that an actual or threatened release of hazardous substances *may* present an imminent and substantial endangerment. Thus, the Tenth Circuit was incorrect in concluding that states would enjoy greater injunctive authority under § 121(e)(2) than the federal government under § 106(a).

B. There are requirements to which state-selected remedial actions must conform under CERCLA.

The Tenth Circuit also based its holding on its conclusion that CERCLA does not require state-selected remedial actions to comply with any requirements. Appendix A at App. 23 to App. 26. The court's analysis is incorrect and fails to follow the standard adopted by the First, Second, and Eighth Circuits: "We will not interpret section 9607(a) in any way that apparently frustrates the statute's goals, in the absence of a specific congressional intention otherwise." *New York v. Shore Realty Corp.*, 759 F.2d 1032, 1045 (2d Cir. 1985); *Dedham Water Co.*, 805 F.2d at 1081; *Aceto Agricultural Chemicals Corp.*, 872 F.2d at 1380.

CERCLA § 107(a)(4)(A) expressly authorizes states to recover all costs of remedial action but *requires* such costs to be not inconsistent with the NCP as the prerequisite to such recovery. *See, e.g., Shore Realty Corp.*, 759 F.2d at 1041

("states, like EPA, can sue responsible parties for remedial and removal costs *if* such efforts are 'not inconsistent with' the NCP") (emphasis added). Obviously, when a statute creates a cause of action that is conditional upon compliance with certain requirements, a party *must* comply with those requirements in order to successfully proceed pursuant to that cause of action. *See United States ex rel. Texas Portland Cement Co. v. McCord*, 233 U.S. 157, 162 (1914) ("The statute thus creates a new liability and gives a special remedy for it, and upon well settled principles the limitations upon such liability become a part of the right conferred and compliance with them is made essential to the assertion and benefit of the liability itself").

In the present case, Colorado *was* proceeding under the authority of CERCLA § 107(a) in seeking to recover its remedial action costs. Thus, in order to prevail in the current action, Colorado's costs *were required* to be not inconsistent with the NCP. Colorado was required by the NCP to select a remedial action that was protective of human health and the environment; that attains or exceeds ARARs; and that was cost effective. *See* 40 C.F.R. §§ 300.71(a)(4), 300.71(a)(2)(ii)(B), 300.68(i)(1) (1989);[5] 55

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[5] The Tenth Circuit concluded that Colorado cannot rely on 40 C.F.R. § 300.68(i)(1) (1989) because that section only applies to lead agencies. Appendix A at App. 25 to App. 26. However, 40 C.F.R. § 300.71(a)(2) (1989) lists the NCP requirements with which a state must comply in order to be not inconsistent with the NCP whether or not the state is acting as a lead agency. 40 C.F.R. § 300.71(a)(2)(ii)(B) requires Colorado to comply with 40 C.F.R. § 300.68(e)-(i). Thus, the court was incorrect in ruling that § 300.68(i)(1) does not apply to the present case.

Fed. Reg. 8666, 8850 (1990) (to be codified at 40 C.F.R. § 300.430(f)(1)(i)(A) and (ii)(A), (B) and (D) (1990)). These requirements *are* requirements to which state-selected remedial actions are required to conform under CERCLA, and thus the Tenth Circuit was incorrect in ruling that § 121(e)(2) does not authorize injunctive relief with respect to state-selected remedial actions.

CONCLUSION

For all of the foregoing reasons, the petition for writ of certiorari should be granted.

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APPENDIX A

PUBLISH

UNITED STATES COURT OF APPEALS

TENTH CIRCUIT

STATE OF COLORADO, Plaintiff-Appellee, vs. IDARADO MINING COMPANY, et al., Defendants-Appellants and Third-Party Plaintiffs, vs. BAUMGARTNER OIL COMPANY, et al., Third-Party Defendants.	Nos.	89-1077 89-1326 89-1344 90-1129

APPEAL FROM THE UNITED STATES DISTRICT COURT FROM THE DISTRICT OF COLORADO
(D.C. No. 83-C-2385)
(707 F. Supp. 1227)

James D. Ellman, Assistant Attorney General, CERCLA Litigation Section (Duane Woodard, Attorney General, Charles B. Howe, Chief Deputy Attorney General, Richard H. Forman, Solicitor General, & Michael R. Hope, Deputy Attorney General, CERCLA Litigation Section, with him on the brief), State of Colorado, Denver, Colorado, for Plaintiff-Appellee.

Nancy C. Shea, Shea & Gardner, Washington, D.C. (James R. Bieke, Michael S. Giannotto & Paula A. Sweeney, Shea & Gardner, Washington, D.C. and Christopher Lane & Cassandra G. Sasso, Sherman & Howard, Denver, Colorado, with her on the brief), for Defendants-Appellants.

Richard B. Stewart, Assistant Attorney General, David C. Shilton & Dirk D. Snel, Attorneys, Land and Natural Resources Division Appellate Section, Department of Justice, and Charles Openchowski, Office of the General Counsel & Nancy Mangone, Office of Enforcement and Compliance Monitoring, United States Environmental Protection Agency, Washington, D.C., for the United States, Amicus Curiae.

Before McKAY, ANDERSON and BALDOCK, Circuit Judges.

BALDOCK, Circuit Judge.

Defendants-appellants Idarado Mining Company, Newmont Mining Corporation, and Newmont Services Limited appeal from a mandatory injunction issued by the district court on February 22, 1989. Plaintiff-appellee State of Colorado (State) is the beneficiary of the injunction, issued on the authority of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. §§ 9601-9626, as amended by the 1986 Superfund Amendments and Reauthorization Act

(SARA), Pub. L. No. 99-499, 100 Stat. 1613 (1986). Subsequent to the issuance of the injunction, the district court entered judgment in favor of the State for past response costs plus prejudgment interest. *State of Colorado v. Idarado Mining Co.*, 735 F. Supp. 368 (D. Colo. 1990). That interlocutory order is not the subject of this appeal. *See* Appellants' Motion for Consolidation at 3 (filed May 10, 1990).

The injunction issued on the authority of § 121(e)(2) of CERCLA, 42 U.S.C. § 9621(e)(2), directs appellants to carry out an extensive environmental cleanup plan proposed by the State and adopted, with various modifications, by the district court. *See Colorado v. Idarado Mining Co.*, 707 F. Supp. 1227, 1232, 1261-63 (D. Colo. 1989), *amended in part*, 735 F. Supp. 368 (1990). In December 1989, a three-judge panel of this court stayed the injunction pending appeal. *See* Fed. R. App. P. 8(a); 10th Cir. R. 8.1. The district court's jurisdiction arose under 28 U.S.C. § 2201 and § 113(b) of CERCLA, 42 U.S.C. 9613(b); our jurisdiction to consider the appeal from the district court's grant of an injunction arises under 28 U.S.C. 1292(a)(1).

I.

As enacted in 1980 and amended in 1986, CERCLA was designed to facilitate cleanup of environmental contamination caused by releases of hazardous substances. The act sets forth several mechanisms for responding to such releases and delineates the respective powers of the federal government, the states, Indian Tribes and private parties. Section 111 of CERCLA provides for the creation of a Hazardous Substance Superfund to finance cleanup

actions at sites affected by releases or threatened releases of hazardous substances. 42 U.S.C. § 9611. Section 104(a) authorizes the federal government to take necessary cleanup actions financed by the Superfund to respond to such releases or threatened releases. 42 U.S.C. § 9604(a). Alternatively, under § 104(d), the federal government may enter into cooperative agreements with states, political subdivisions or Indian Tribes to conduct cleanup actions using the Superfund. 42 U.S.C. § 9604(d).

To shift the financial burden of a cleanup to the parties responsible for the releases, a governmental entity may sue these parties for the costs incurred in responding to a release. CERCLA § 107(a); 42 U.S.C. § 9607(a). In such a cost recovery action, responsible parties include, among others, the "owner or operator" of the facility from which the release occurred. *Id.* Even when no cooperative agreement exists permitting use of Superfund money for cleanup, CERCLA § 114(a) preserves the right of a state or other party to proceed under applicable state law to conduct a cleanup of a site affected by hazardous substances. 42 U.S.C. § 9614(a). States or other parties which incur response costs not financed by the Superfund may bring a cost recovery action against the responsible parties. 42 U.S.C. § 9607(a).

When a cost recovery action is brought by the federal government, a state, an Indian Tribe or a private party, § 107(a)(4) imposes liability on responsible parties for response costs "not inconsistent with the national contingency plan [NCP]." 42 U.S.C. § 9607(a)(4). The NCP consists of procedural and substantive guidelines issued by the Environmental Protection Agency (EPA) governing CERCLA cleanup actions. *See* 40 C.F.R. pt. 300 (1989).

Liability among responsible parties is joint and several, *O'Neill v. Picillo*, 883 F.2d 176, 178-79 (1st Cir.), *cert. denied*, 110 S. Ct. 1115 (1989), and one responsible party may seek contribution from other responsible parties, 42 U.S.C. 9613(f).

In addition to the authority to finance cleanups from the Superfund and to recover costs from responsible parties, CERCLA provides the federal government with additional power to deal with releases of hazardous substances by bringing an abatement action in federal district court. *See generally Koppers Indus., Inc. v. United States EPA*, 902 F.2d 756, 757 n.1 (9th Cir. 1990) (discussing federal options); *United States Fidelity & Guar. Co. v. Morrison Grain Co.*, 734 F. Supp. 437, 441 (D. Kan. 1990) (same). If the President determines that a release or threatened release may pose "an imminent and substantial endangerment to the public health or welfare or the environment," § 106(a) provides that the federal government may seek "such relief as the public interest and the equities of the case may require." 42 U.S.C. § 9606(a). Such relief may include a mandatory injunction compelling responsible parties to perform a cleanup. *See, e.g., United States v. Conservation Chem. Co.*, 619 F. Supp. 162, 192 (W.D. Mo. 1985). However, § 106(a) does not allow a state, with or without a cooperative agreement, to seek injunctive relief against responsible parties. *See* 42 U.S.C. § 9606(a). Whether that authorization is found elsewhere in CERCLA is the subject of this appeal.

II.

This action relates to a cleanup of a highly mineralized area that has been prospected and mined

extensively throughout the century. *Idarado*, 707 F. Supp. at 1234. According to the State, Idarado and its codefendants are responsible for various metallic releases in certain rivers and creeks located between the towns of Teluride [sic] and Ouray in southwestern Colorado. The sources of these releases are tailings piles, mine portals and waste rock piles. Tailings essentially are finely ground ore from which most of the valuable metal has been removed by the milling process. Because some metal remains, however, tailings piles release metal when water flows over or seeps through them. Portals are mine openings originally used for access to underground mines. Water entering a mine by seepage from the surface or by groundwater movement can pick up metals while flowing through mineralized materials underground and then exiting through the mine portals. Waste rock is material removed from a mine lacking sufficient metal content to warrant further processing. Like tailings, waste rock can release metals upon contact with water flows.

Idarado's properties are located in three areas. Two are in the Telluride and Red Mountain valleys, separated by the mountains in which Idarado's mine is located. The Telluride Valley property contains six tailings piles and two mine portals. *Id.* at 1233. The San Miguel River flows through Idarado's property, down the valley, and past the town of Telluride. The Red Mountain Valley property contains five tailings piles and several portals and waste rock piles. *Id.* Red Mountain Creek flows through the valley past Idarado's property and empties into the Uncompahgre River above the town of Ouray. The third property is known as the High Country, consisting of the

mountain basins between the Telluride and Red Mountain Valleys. The parties have agreed in large part upon remediation for the High Country.

The State of Colorado initiated this action against Idarado, its parent company, Newmont Mining Corporation, and a subsidiary of the parent which had provided services to Idarado, Newmont Services Limited. The State's complaint, as amended, sought to hold the defendants liable for cleanup costs associated with the Idarado mining properties.[1] Following the enactment of SARA in 1986, the state further supplemented its pleadings to seek an injunction directing Idarado to cleanup the sites.

In March 1987, the State issued a Record of Decision (ROD) which contained its proposed plan for remedial activities to be undertaken at the sites. Thereafter, the district court ruled that Newmont Mining was an "owner and operator" of the Idarado facilities and that Newmont Services was an "operator" of those facilities because

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[1] The State's amended complaint also included pendent state law claims, but these were dismissed by the district court. The State also sought monetary recovery for damage to natural resources pursuant to CERCLA § 107(a)(4)(C). *See* 42 U.S.C. § 9607(a)(4)(C). Idarado filed third-party claims for contribution under CERCLA § 113(f), against certain other owners of mining facilities in the Red Mountain Valley. *See* 42 U.S.C. 9613(f). With the consent of the parties, the district court bifurcated the trial into two consecutive phases: a remedy/response cost phase and a natural resource damage phase. *See* Fed. R. Civ. P. 42(b); *State of Colorado v. Idarado*, No. 83-C-2385, Order Bifurcating Trial at 1-2 (D. Colo. filed Apr. 20, 1987). The district court also severed Idarado's third-party claims for contribution. The natural resource damage phase and the contribution phase have yet to take place.

both entities "were involved directly in day-to-day operations of Idarado Mining Company and the sites here in dispute." *See Colorado v. Idarado Mining Co.*, 18 Env'tl. L. Rep. (Envt'l. L. Inst.) 20578, 20579 (D. Colo. 1987); *see also United States v. Kayser-Roth Corp.*, 724 F. Supp. 15, 22 (D.R.I.), *aff'd*, 910 F.2d 24, ___ (1st Cir. 1990). Accordingly, Newmont Mining and Newmont Services, as well as Idarado Mining, were held liable under CERCLA § 107(a)(1), 42 U.S.C. § 9607(a)(1).

During twenty-six trial days, the district court considered the testimony of over thirty witnesses and received over 1,000 documents into evidence. The record on appeal consists of sixty volumes and we obtained the pleadings below. Much of the evidence concerns the extent, if any, of environmental harm and whether the proposed remediation alternatives presented by the State and Idarado were technically feasible, cost-effective and consistent with the NCP. The district court determined that surface and ground water had been contaminated by releases from tailings, as evidenced by damage to the aquatic environment. *Idarado*, 707 F. Supp. at 1236-37, 1249, 1252, 1255. With various modifications, the district court determined the State's plan "effectively protects and minimizes threats to public health, welfare and the environment." *Id.* at 1261. Having declared the defendants liable for future cleanup activity under CERCLA § 107(a)(4)(A), the court entered a mandatory injunction requiring the defendants to execute the State's plan as modified. *Idarado*, 707 F. Supp. at 1262. The district court indicated that it would retain jurisdiction over the parties

to insure full compliance with its order concerning remedial activities. *Id.* The district court also retains jurisdiction also to resolve the plaintiffs' pending claims for natural resource damage and defendants' third-party claims for contribution.[2]

III.

On appeal, defendants contend that the district court (1) lacked authority under CERCLA to grant the State injunctive relief, (2) made inadequate and unsupported findings of fact in deciding that the State's cleanup plan was "not inconsistent with" the NCP, (3) lacked authority to hold the defendants liable for the permanent relocation

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[2] In interlocutory appeals under 28 U.S.C. § 1292(b) and Fed. R. Civ. P. 54(b), the district court retains jurisdiction to act on matters not involved in the appeal. 9 J. Moore, B. Ward & B. Lucas, *Moore's Federal Practice* ¶ 203.11 (2d ed. 1990); *Garcia v. Burlington N. R.R. Co.*, 818 F.2d 713, 721 (10th Cir. 1987). However, the district court is generally without jurisdiction to proceed when an interlocutory appeal is from the rejection of a double jeopardy defense or the denial of absolute or qualified immunity. *Stewart v. Donges*, Nos. 88-2454 & 88-3020, slip op. at 9-10 (10th Cir. Sep. 17, 1990) [1990 WL 132564].

Here, the interlocutory appeal under 28 U.S.C. § 1292(a)(1) is from the district court's grant of a mandatory injunction, thus, "the district court retains power to act on the case pending appeal." 16 C. Wright, A. Miller, E. Cooper & E. Gressman, *Federal Practice and Procedure* § 3921 at 26 (1977). And the district "court in its discretion may suspend, modify, restore, or grant an injunction during the pendency of the appeal." Fed. R. Civ. P. 62(c). *Accord* 9 *Moore's Federal Practice* ¶ 203.11 (appeal from the grant or denial of a preliminary injunction does not "divest the district court of jurisdiction to proceed with the action on the merits.").

of the residents of a trailer park, (4) improperly held defendants liable for cleaning up Red Mountain Creek, (5) improperly held defendant's [sic] liable for remediation of releases from certain mine portals, and (6) improperly held that the defendants Newmont Mining Corp. and Newmont Services Ltd. were owners or operators of defendant Idarado's facilities. We vacate the district court's injunction and remand on the basis of the first and third points. We decline to decide the remaining issues at this time because the district court will modify its relief based upon this opinion and various portions of the case, which could affect the phase just completed, have yet to be resolved. *See Thornburgh v. American College of Obstetricians & Gynecologists*, 476 U.S. 747, 757 (1986) (discussing principles of pendent appellate jurisdiction in the injunction context); *Tri-State Generation & Transmission v. Shoshone River Power, Inc.*, 874 F.2d 1346, 1351-53 (10th Cir. 1989) (same); *see also Hill v. Department of the Air Force*, 884 F.2d 1318, 1320 (10th Cir. 1989), *cert. denied*, 110 S. Ct. 2206 (1990) (on appeal from denial of qualified immunity, court considered merits of non-immunity issue); *Dube v. State Univ.*, 900 F.2d 587, 598-600 (2d Cir. 1990) (same).

A.

Defendants argue that even if we decide that the district court lacked authority to issue the mandatory injunction, we should exercise pendent appellate jurisdiction over whether the State's plan is "not inconsistent with" the NCP because this issue is critical to the implementation of an appropriate remedy, regardless of *who* actually implements the remedy. Appellants' Brief at 41 n.28. Without question, we have jurisdiction to consider

those matters which are closely related to the grant or denial of the injunction. *Asset Allocation & Management v. Western Employers Ins. Co.*, 892 F.2d 566, 568-69 (7th Cir. 1989); *Tri-State*, 874 F.2d at 1351-52. We also have discretionary jurisdiction to consider "rulings that are related but not essential to the validity of the injunction." *Asset Allocation*, 892 F.2d at 569; *Tri-State*, 874 F.2d at 1352-53. Important factors which inform our discretion whether to exercise pendent appellate jurisdiction include (1) whether the otherwise nonappealable issue is sufficiently developed, both factually and legally, for our review, *Tri-State*, 874 F.2d at 1352, (2) whether review of the appealable issue involves consideration of factors closely related or relevant to the otherwise nonappealable issue, *McCowan v. Sears Roebuck & Co.*, 908 F.2d 1099, 1104 (2d Cir.), *petition for cert. filed*, No. 90-274 (Aug. 13, 1990); *Dube*, 900 F.2d at 598; *Tri-State*, 874 F.2d at 1352, and (3) whether judicial economy will be better served by resolving the otherwise nonappealable issue, notwithstanding the federal policy against piecemeal appeals, *see McCowan*, 908 F.2d at 1099 (although pendent appellate jurisdiction should be used sparingly, pendent review of otherwise nonappealable issue was "a wise and time saving exercise of . . . discretion"); *Tri-State*, 874 F.2d at 1352 (not exercising pendent appellate jurisdiction over otherwise nonappealable issue that did not need further development of record would be a "waste of judicial resources").

B.

This is a case in which the district court bifurcated the trial pursuant to Fed. R. Civ. P. 42(b), *see supra* n.1;

"[t]here is no final judgment until all of the issues have been resolved and judgment entered on the whole case." 9 C. Wright & A. Miller, *Federal Practice & Procedure* § 2392 (1971 & 1990 Supp.). This interlocutory appeal concerns the district court's authority to grant injunctive relief; our resolution turns on the construction of CERCLA §§ 121(e) and 101(24), rather than on the remaining issues raised by defendants under other provisions of CERCLA. Although the defendants are confident that the district court will not reconsider its findings and conclusions on these remaining issues, *see* Appellants' Brief at 41 n.28., we simply do not have before us a judgment which finally resolves the remedial issue consistent with liability permitted under the Act. Nor do we have before us the district court's interlocutory order awarding the State past response costs, which, in the interest of judicial economy, should be considered at the same time the State's plan (as modified) is evaluated for cost recovery.

Any appellate determination about whether the State's plan is "not inconsistent with" the NCP, is primarily factual, and in view of our resolution of the injunction issue, not closely related to the merits we must address. In *Tri-State*, we stated that "this court as a matter of law may justifiably, though cautiously, decide other generally nonappealable *legal* issues." 874 F.2d at 1352 (emphasis added). There, the district court determined as a matter of law that the buyer in a requirements contract did not have an implied obligation to remain in business and declined to grant a permanent injunction. On appeal, this court found an absence of irreparable harm which would

support a permanent injunction, but nonetheless considered the merits of the contract issue, a legal issue involving contract interpretation. *Id.* at 1352-53. This court reversed the district court on its application of contract law, but declined to exercise pendent appellate jurisdiction over matters which involve the application of well-established legal standards of review (e.g. abuse of discretion, sufficiency of the evidence) to the trial evidence. *Id.* at 1353. Thus, although some issues were sufficiently well developed factually to review, *see Thornburgh*, 476 U.S. at 757, the court nonetheless declined to exercise pendent appellate jurisdiction over issues concerning remititur, new trial and judgment notwithstanding the verdict. *Tri-State*, 874 F.2d at 1353.

In points two (adequacy of district court findings whether State's plan is "not inconsistent with" the NCP) and four (whether defendants are liable for remediation of Red Mountain Creek), the defendants are challenging in large part whether the district court's factual findings are supported by the record. These claims primarily concern application of the clearly erroneous standard of review to the voluminous record. *See* Fed. R. Civ. P. 52(a). We decline to exercise pendent appellate jurisdiction over these claims in the interest of judicial efficiency and consistency. These issues should be resolved when past response costs and any natural resource damages are considered. At that time, any subsequent factual findings will be before us. Resolving numerous fact-bound issues in a single appeal from a final judgment is in keeping with this court's concern with judicial efficiency.

Defendants' point five (whether releases from the Mill and Meldrum Tunnel mine portals constitute

federally permitted releases which are exempt from CERCLA liability) and point six (whether Newmont Mining may be held liable as an "owner and operator" and Newmont Services as an "operator") do contain legal issues, however, our preliminary review of the district court's factual findings and legal conclusions and the record on appeal convince us that the factual issues predominate and are best resolved on appeal from a final judgment. In the exercise of our discretion, we decline to review all points but those most directly related to the injunctive relief. Hence, we decide defendants' points one and three at this time.

IV.

The State's position concerning the authority of the district court to grant injunctive relief must be examined with reference to those courts which have considered this issue, legislative history and, most importantly, the language of the statute and its reasonable interpretation in light of CERCLA. CERCLA is a remedial statute and its provisions should be construed liberally, but with due regard for executive and legislative intent as reflected in the enactment process and the statute itself. *See Kayser-Roth*, 910 F.2d at ___; *State of New York v. Shore Realty*, 759 F.2d 1032, 1045 (2d Cir. 1985).

A.

Prior to the amendment of CERCLA, several courts had rejected the position that injunctive relief was available to states and other non-federal plaintiffs. In *Shore Realty*, the Second Circuit rejected New York's claim that

a district court has inherent or implied power to grant injunctive relief under § 107 of CERCLA in view of the express injunctive authority and accompanying standard for injunctive relief contained in § 106. 759 F.2d at 1049-50 (construing 42 U.S.C. §§ 9606, 9607). Section 106 specifically identifies the federal government as entitled to injunctive relief; allowing an injunction under § 107 (which is silent concerning injunctive relief) would render § 106's express language surplusage. *Shore Realty*, 759 F.2d at 1049. Moreover, the standard for obtaining relief in an abatement action under § 106 is narrower than that in a cost recovery action under § 107. Allowing injunctive relief to any § 107 plaintiff would conflict with § 106's narrower scope. *Shore Realty*, 759 F.2d at 1049. *Accord Conservation Chem. Co.*, 619 F. Supp. at 231-32; *Cadillac Fairview/California, Inc. v. Dow Chem. Co.*, 21 Env't Rep. Cas. (BNA) 1108, 1115-17 (C.D. Cal. 1984), *aff'd in pertinent part*, 840 F.2d 691, 696-97 (9th Cir. 1988); *Velsicol Chem. Corp. v. Reilly Tar & Chem. Corp.*, 21 Env't Rep. Cas. (BNA) 2118, 2121 (E.D. Tenn. 1984). On appeal and below, the State concedes that, prior to the effective date of the SARA amendments in 1986, a state could not obtain injunctive relief under CERCLA requiring private defendants to implement a state cleanup plan.[3]

Courts have adhered to the view that injunctions are not available to states and other non-federal plaintiffs

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[3] *See* State's Answer Brief at 5; Plaintiff's Memorandum in Opposition to Defendants' Motion to Dismiss Plaintiff's Claims for Injunctive and Declaratory Relief to Enforce or Approve Its Remedial Action Plan at 9 (D. Colo. filed May 14, 1987), *incorporating* Plaintiff's Trial Memorandum § XIII at 150-51 (D. Colo. filed Apr. 20, 1987).

under CERCLA, even after the 1986 SARA amendments. *See Cadillac Fairview*, 840 F.2d at 696-97; *United States v. Cannons Eng'g Corp.*, 720 F. Supp. 1027, 1052 (D. Mass. 1989), *aff'd*, 899 F.2d 79 (1st Cir. 1990); *United States v. Akzo Coatings*, 719 F. Supp. 571, 577-78 (E.D. Mich. 1988); *McGregor v. Industrial Excess Landfill, Inc.*, 709 F. Supp. 1401, 1408-09 (N.D. Ohio 1987), *aff'd*, 856 F.2d 39 (6th Cir. 1988); *State of Vermont v. Staco, Inc.*, 684 F. Supp. 822, 835 (D. Vt. 1988); *Brewer v. Ravan*, 680 F. Supp. 1176, 1180 (M.D. Tenn. 1988); *Utah State Dep't of Health v. Ng*, 649 F. Supp. 1102, 1105-06 (D. Utah 1986).

B.

The State argues that injunctive relief for states is now authorized by CERCLA § 121(e)(2), 42 U.S.C. 9621~~(e)~~~~(2)~~ which provides in part:

> A State may enforce any Federal or State standard, requirement, criteria, or limitation to which the remedial action is required to conform under this Act in United States district court for the district in which the facility is located.

Section 121 of CERCLA, added by SARA, deals with cleanup standards applicable to federal cleanup actions, and with the rights of the states to participate in such federal remedial activities. Section 121(e)(2)[4] allows a

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[4] The section provides:

> A State may enforce any Federal or State standard, requirement, criteria, or limitation to which the remedial action is required to conform under this Act

(Continued on following page)

state to insure that a remedy of federal character will comply with substantive federal and state cleanup standards required of federal remedies under CERCLA.

The district court referenced § 121(e)(2) and concluded that "injunctive relief also is available to the State under CERCLA." *Idarado*, 707 F. Supp. at 1232. For the reasons that follow, we hold that the structure of CERCLA does not permit the injunctive relief granted in these circumstances, notwithstanding § 121(e)(2).

In a presentation that does not cultivate simplicity, the State reminds us that § 121(e)(2) allows a state injunctive relief "to enforce any requirement to which the remedial action is required to conform." Appellee's Brief at 6. According to the State, the standards, requirements, criteria, or limitations referred to in § 121(e)(2) include the requirements of CERCLA and the NCP, as well as applicable requirements of federal and state environmental

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(Continued from previous page)

in United States district court for the district in which the facility is located. Any consent decree shall require the parties to attempt expeditiously to resolve disagreements concerning implementation of the remedial action informally with the appropriate Federal and State agencies. Where the parties agree, the consent decree may provide for administrative enforcement. Each consent decree shall also contain stipulated penalties for violations of the decree in an amount not to exceed $25,000 per day, which may be enforced by either the President or the State. Such stipulated penalties shall not be construed to impair or affect the authority of the court to order compliance with the specific terms of any such decree.

42 U.S.C. § 9621(e)(2).

law (ARARs).[5] Appellee's Brief at 6 (citing CERCLA 121(d); 40 C.F.R. 300.68(i)(1) & 300.71(a)(4) (1989)). The State then argues that it was required to integrate all ARARs described in the NCP regulations into its plan pursuant to 40 C.F.R. § 300.71(a)(4), and, therefore, should be granted an injuction [sic] to enforce such requirements. Appellee's Brief at 9. The State further argues, relying upon 40 C.F.R. § 300.68(e)(1), that because its cost recovery action under CERCLA § 107 was required to be "not inconsistent with" the NCP, the State's remedial action plan has incorporated NCP standards as well, and the State must be allowed injunctive relief to uphold NCP standards. Appellee's Brief at 9-11. Next, the State argues that when the district court approved the State's remedial action plan with minor modification, the State's plan became an additional requirement to which the remedial action was required to conform and, consequently, injunctive relief was available. *Id.* at 12-13. Finally, the State argues that the district court had inherent equitable authority to grant injunctive relief. *Id.* at 25-28.

C.

The State's position is untenable because it ignores the scope of § 121 and fails to view the provision in the context of CERCLA, which still contains an express and limited grant of injunctive authority in § 106. Section § [sic] 121(e)(2) allows states to enforce requirements of

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[5] These other federal and state requirements are commonly designated as "applicable or relevant and appropriate requirements," and abbreviated as ARARs.

remedial actions embodied in consent decrees under CERCLA and describes requirements of such consent decrees. We may consult legislative history as a secondary source of a statute's meaning, *Miller v. Commissioner*, 836 F.2d 1274, 1282-83 (10th Cir. 1988), and our understanding of § 121(e)(2) is in accord with the Conference Report addressing the 1986 amendments enacted by SARA. About § 121(e)(2), the Report indicates:

> States are given the authority to enforce requirements of consent decrees to which the remedial action must conform, in Federal district court. Consent decrees are to contain dispute resolution and enforcement provisions, and may include administrative enforcement. Consent decrees must contain stipulated penalties for violations of the decree of $25,000 per day,[6] enforceable by the President or the State.

H.R. Rep. No. 99-962, 99th Cong., 2d Sess. 249 (1986). Our job in construing statutes is to effectuate the intent reflected in the language of the enactment and the legislative process, however, neither the text of § 121(e)(2) nor the relevant legislative history supports the State's expansive interpretation.

By its express terms, § 121(e)(2) limits a state's enforcement authority to "any Federal or State standard, requirement, criteria, or limitation to which the remedial action is required to conform under this Act [CERCLA]." We agree with amicus United States and the defendants that the term "the remedial action" for purposes of § 121(e)(2) pertains to the remedial action encompassed

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[6] Section 121(e)(2) as enacted allows for penalties "in an amount not to exceed $25,000 per day."

by § 121. Section 121 unquestionably envisions a remedial action selected by the federal government or its delegates.

Section 121 provides a general description of the criteria, methods, and procedures which EPA must follow in the selection of a remedial action. Section 121 begins:

> (a) Selection of remedial action. The President shall select appropriate remedial actions determined to be necessary to be carried out under section 104 or secured under section 106 which are in accordance with this section and, to the extent practicable, the national contingency plan, and which provide for cost effective response. . . .

Section 121 pertains to remedial actions selected by the President through EPA. Not only in § 121(a), but also in §§ 121(c) and (d)(2)(A), § 121 refers to remedial actions under §§ 104 and 106, which are remedies selected by the federal government or its delegates. Section 121(d) likewise refers to "[r]emedial actions selected under this section or otherwise required or agreed to by the President under this Act. . . . " Thus, the term "remedial action" in § 121(e)(2) means a remedial action which is selected by the federal government or its delegates. The remedial action plan developed by the State of Colorado was not undertaken by the EPA pursuant to CERCLA §§ 104 or 106.[7]

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[7] The State's Record of Decision (ROD) puts the matter this way:

> The remedial action in this case is not undertaken pursuant to section 104 or 106 of . . . CERCLA, as

(Continued on following page)

To adopt the State's interpretation would defeat the intended scope of state involvement as contained in § 121(f). Section 121(f) provides a mechanism for state involvement in the selection and adoption of remedial actions which are federal in character. 42 U.S.C. § 9621(f)(1)-(3). For example, states must be given a "reasonable opportunity for . . . review and comment" on investigations, feasibility studies, and planned remedial actions. 42 U.S.C. § 9621(f)(1)(E). Prior to entry of a federal consent decree in which the EPA waives a federal or state standard (ARAR), under § 121(d)(4), a state is given an opportunity to concur in the remedial action and, if it does not, the state may intervene as of right. 42 U.S.C. § 9621(f)(2)(A) & (B). If the court upholds EPA'a [sic] waiver of a standard, the state may seek to have the standard incorporated into the remedial plan, provided the state pays the additional costs. 42 U.S.C. § 121(f)(2)(B). When the EPA has determined that a particular standard or requirement is an ARAR for a particular remedial action, § 121(e)(2) merely allows a state to enforce that standard or requirement as an ARAR contained in a federal remedial action and implemented by a consent decree.

(Continued from previous page)

> amended by . . . SARA, 42 U.S.C. sec. 9604 and 9606 (1986), respectively. Therefore, the remedial action selection process set out in section 121 of SARA, 42 U.S.C. sec. 9621 (1986), is not strictly applicable.

ROD, pl. ex. 168A at 73, *reproduced in* Appellants' Addendum of Exhibits at A-1. The State indicates that notwithstanding it has determined cleanup levels in general conformity with § 121 and the NCP.

To allow a state to select a plan independently and then to commence an abatement action under § 121(e)(2) would render these provisions irrelevant. *Akzo Coatings*, 719 F. Supp. at 578. Moreover, in cases in which the EPA has waived a standard and a state does not agree, the state could have two bites out of the apple when it comes to challenging the waiver of an ARAR. *Id.* First, the state could follow the procedure of § 121(f) and seek judicial review prior to the entry of a consent order. *Id.* If the district court upheld the EPA and the state was unwilling to pay the extra cost of incorporating the waived ARAR into the remedial action, the state could seek to enforce the ARAR under § 121(e)(2), all without paying the extra cost required under § 121(f)(2)(B). *Id.*

It is of no moment that such circumstances will not occur in this case because the federal government is not involved in the remedial plan. Peculiar consequences would result from allowing a state to use § 121(e)(2) to compel performance of its remedial plan when that plan was developed without federal involvement. Most significantly, the states would enjoy greater injunctive authority than the federal government, because the federal government must make a showing of "imminent and substantial endangerment to the public health or welfare" when it seeks injunctive relief under § 106; no such showing is necessary under § 121(e)(2). Finally, construing § 121(e)(2) to authorize injunctive relief in these circumstances, but relegating states challenging federal consent decrees to the procedures in § 121(f)(2)(A) & (B) would amount to pure judicial legislation.

D.

Apart from these problems, we also must reject the State's arguments that conforming its plan to the NCP and federal and state standards (ARARs) automatically meant that its independently selected and financed remedial plan was *required* to conform to those criteria within the meaning of § 121(e)(2). Even if the State could overcome the hurdle that § 121(e)(2) identifies a remedial action selected by the federal government or its delegates, the State would have to identify standards with which CERCLA *requires* a state to comply as a prerequisite to selecting a plan. To be sure, several advantages accrue to the State from compliance with CERCLA § 121 and the NCP, *see* NCP Proposed Rule, 53 Fed. Reg. 51,394, 51,458[8] (Dec. 21, 1988). But § 121(d)(2), with exceptions

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[8] 53 Fed. Reg. at 51,458 provides in part:

> Subpart F does not require that States select remedies for non-Fund-financed State-lead enforcement sites in conformance with CERCLA section 121 and the remedy selection process specified in the NCP. However, where a State-selected remedy does not so conform, States and or PRPs may be at risk in several ways, includig [sic] but not limited to the following: (1) EPA will not concur with the recommended remedy; (2) EPA may refuse to designate the State as lead agency for any subsequent response activities; (3) States and PRPs may be deprived of the assurance that EPA will find it necessary later to seek to compel further response actions; (4) EPA may be unable to delete a site from the NPL and/or (5) State cost recovery efforts may be hindered.

Failing to comply with CERCLA § 121 and the NCP selection process would appear to carry far more significant consequences than amicus United States and the defendants are willing to admit.

contained in § 121(d)(4), (f)(2) & (3), *requires* remedial plans selected by the federal government or its delegates to conform to federal and state standards, requirements, criterion, or limitations, regardless of whether response costs are sought. The same cannot be said with respect to remedial plans selected independently by the State, which developed this plan to be "not inconsistent with" the NCP and with attention to § 121, in order to accrue certain advantages, including cost recovery. *See supra* n.8.

The State has not identified "any Federal or State standard, requirement, criteria, or limitation to which [its] remedial action is *required* to conform under [CERCLA]" *see* CERCLA § 121(e)(2) (emphasis added), within the meaning of § 121(e)(2). The State's reliance upon 40 C.F.R. § 300.71(a)(4)[9] (1989) is misplaced. The State must comply with "all otherwise legally applicable or relevant and appropriate Federal, State, and local

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[9] 40 C.F.R. § 300.71(a)(4) (1989) provides:

> Persons performing response actions that are neither Fund-financed nor pursuant to action under section 106 of CERCLA shall comply with all otherwise legally applicable or relevant and appropriate Federal, State, and local requirements, including permit requirements.

This regulation was superseded by a new NCP effective April 9, 1990. EPA, National Oil and Hazardous Substances Pollution Control Contingency Plan, 55 Fed. Reg. 8,666-8,865 (March 8, 1990). The new NCP provides that "[a]ny person may undertake a response action to reduce or eliminate a release of hazardous substance, pollutant or contaminant," and also sets forth prerequisites for § 107(a) cost recovery, including consistency with the NCP and compliance with ARARs. *Id.* § 300.700(a)-(c), 40 [sic] Fed. Reg. 8,858-59.

requirements, including permit requirements" *id.*, not as a condition to selecting its plan, but to recover its costs under § 107. This interpretation is supported by the preamble accompanying the 1985 NCP: "§ 300.71 does set out the requirements that a private party or State must meet for a response to be 'consistent [or not consistent] with the NCP' to recover its costs from a responsible party pursuant to CERCLA section 107." NCP Final Rule, 50 Fed. Reg. 47,912, 47,934 (Nov. 20, 1985). The EPA explained that "[t]o be consistent with the NCP for the purposes of cost recovery under CERCLA, non-Fund-financed responses must. . . . comply with all otherwise applicable or relevant and appropriate Federal, State and local requirements." *Id.* at 47935.

Nor can the State take comfort from its citation of 40 C.F.R. § 300.68(i)(1)[10] (1989), requiring selection of a remedial plan that complies with federal ARARs. Section 300.68(i)(1) by its terms applies to a "lead agency" which

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[10] 40 C.F.R. § 300.68(i) (1989) provides:

> *Selection of remedy.* (1) The appropriate extent of the remedy shall be determined by the lead agency's selection of a cost-effective remedial alternative that effectively mitigates and minimizes threats to and provides adequate protection of public health and welfare and the environment. Except as provided in § 300.68(i)(5), this will require selection of a remedy that attains or exceeds applicable or relevant and appropriate Federal public health and environmental requirements that have been identified for the specific site.

is defined in § 40 C.F.R. 300.6[11] (1989) to include only federal agencies and their delegates. The State is not a lead agency under the regulation.

E.

The State also contends that its remedial actions were required to comply with the NCP and other standards by virtue of § 107(a). But merely because § 107(a) allows cost recovery for response costs "not inconsistent with the NCP does not mean that the State's actions were required by § 107(a) and now may [sic] enforced by injunctive relief under § 121(e)(2). An action for state cost recovery is permissive, not mandatory. To adopt the State's approach would mean that entitlement to injunctive relief under § 121(e)(2) would turn on whether a state seeks response costs. Building on this argument, however, the State offers the following tautology: once the district court found that the State's plan was "not inconsistent with" the NCP, the elements of the plan became requirements "to which the remedial action is required to conform under CERCLA." That the plan must conform to itself is circular, but putting that problem aside, the district court's finding that the plan is "not inconsistent with" the NCP merely allows the State response costs on remand (should it choose to implement the plan), not

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[11] 40 C.F.R. § 300.6 (1989) provides in pertinent part:

> *Lead agency* means the Federal agency (or State agency operating pursuant to a contract or cooperative agreement executed pursuant to section 104(d)(1) of CERCLA) that has primary responsibility for coordinating response action under this Plan.
>
> . . .

injunctive relief. Neither the State nor anyone else is *required* under CERCLA to implement this specific plan.

F.

The State's last argument is that the district court had inherent equitable authority to issue the injunction. However, application of a district court's equitable power is not appropriate when the statute carefully limits injunctive relief as a remedy. *Transamerica Mortgage Advisors, Inc. v. Lewis*, 444 U.S. 11, 19-20 (1979); *Shore Realty*, 759 F.2d at 1049; *Ng*, 649 F. Supp. at 1106; *Cadillac Fairview*, 21 Env't Rep. Cas. at 1116. Although the State reminds us of our obligation to construe CERCLA to effectuate its broad remedial purpose, this does not endow federal courts, carte blanche, to upset the balance between federal and state authority envisioned by CERCLA. The states have been given certain express authority in the statute. *See, e.g.*, CERCLA §§ 121(f)(1) (permitting review and comment on proposed remedies); 121(f)(2) (permitting states to seek compliance with state ARARs waived pursuant to 121(d)(4)); 107(a)(4)(A) (allowing cost recovery); 104(d) (providing for cooperative agreements with states); 121(e)(2) (enabling states to enforce ARARs set forth in a federal consent decree, regardless of whether the state is a signatory to that decree). For us to imply injunctive authority in these circumstances would exceed what was contemplated by the executive and legislative branches in enacting CERCLA and arrogate to ourselves powers rightfully retained by those two branches of government. *See The Federalist No. 78* (A. Hamilton); *see also* 42 U.S.C. § 9613(h) (limiting federal court jurisdiction concerning challenges to remedial action); *Schalk v. Reilly*, 900 F.2d

1091, 1095-98 (7th Cir.) (judicial challenge to remedial action under CERCLA §§ 104 or 106 permitted only after remedial action is completed), *petition for cert. filed*, No. 90-354 (Aug. 28, 1990); *State of Alabama v. United States EPA*, 871 F.2d 1548, 1557-60 (11th Cir.) (same), *cert. denied*, 110 S. Ct. 538 (1989).

V.

As part of the remedial action plan, the district court thought itself empowered to order the defendants to relocate permanently the month-to-month tenants of the Pandora Trailer Park, so that the State could implement its remediation plan. *Idarado*, 707 F. Supp. at 1258-59. The trailer owners rent the land from defendant Idarado. *Id.* at 1259. From the preceding, it is clear that the district court did not derive such power from § 121(e)(2).

Defendants argue that the district court's action conflicts with CERCLA § 101(24), which in defining "remedial action" provides in pertinent part:

> The term includes the cost of permanent relocation of residents and businesses and community facilities where the *President* determines that, alone or in combination with other measures, such relocation is more cost-effective than and environmentally preferable to the transportation, storage, treatment, destruction, or secure disposition offsite of hazardous substances, or may otherwise be necessary to protect the public health or welfare; . . . .

42 U.S.C. § 9601(24) (emphasis added). As an initial matter, we note that the statute refers to the "cost of permanent relocation," so § 101(24) does not empower the

district court to grant injunctive relief to implement the State's permanent relocation plan. Continuing, however, the district court looked to the purpose of the relocation in deciding that a Presidential order was not a prerequisite for such permanent relocation costs. It determined that because the State was "not attempting to relocate the persons to a new area to isolate them from exposure to toxic waste," but rather to implement its remediation plan for the Idarado facility as a whole, the requirement of a Presidential order contained in § 101(24) did not apply. *Idarado*, 707 F. Supp. at 1258. Another district court has concluded that permanent relocation costs "must be approved by the President to be categorized as reimbursable response costs." *T & E Indus. v. Safety Light Corp.*, 680 F. Supp. 696, 707 (D.N.J. 1988).

The legislative history on this point indicates that on-site remediation normally is preferred because it is significantly less expensive. S. Rep. No. 848, 96th Cong., 2d Sess. 55-56. Even among off-site remedial alternatives, permanent relocation is one "of the most costly possible actions." *Id.* "To assist the President in determining the appropriate remedial action, specific criteria are included in the definition of remedy for" permanent relocation. *See id.* at 55. The Senate Report on the bill from which this provision originated continues:

> The term "remedy" includes the cost of permanently locating residences, businesses, or community facilities when relocation would be more cost-effective than, an [sic] environmentally preferable to, other off-site remedial actions. In addition to these considerations, a decision to provide permanent relocation may

> be based, at least in part, on findings from epidemiological or other health effect studies which, in the opinion of the President, demonstrate that a) there is a substantial probability that exposure to hazardous substances from the site has caused or is likely to cause or contribute to adverse health effect; b) even after remedial actions are taken, persons remaining in the vicinity of the site would be exposed to hazardous substances; and c) such exposure has a significant likelihood of causing or contributing to adverse health effects or exacerbating existing conditions.

Id. This legislative history confirms that permanent relocation ordinarily would be permissible only upon a Presidential finding that on-site and other off-site cleanup alternatives would not be as cost-effective or environmentally sound as permanent relocation. *See* 40 C.F.R. 300.6 (1989) (definition of "remedy or remedial action").

Thus, the Presidential determination requirement applies when permanent relocation is to protect residents from exposure to hazardous substances. Given the overriding concern for efficient use of remediation resources, the requirement also should apply when the land on which they reside is to be used for constructing remedial facilities. The statute is broad enough to encompass the latter situation; the President could make a finding that such action "was otherwise necessary to protect public health and welfare," 42 U.S.C. § 9601(24); 40 C.F.R. 300.6 (1989). Merely because the legislative history addresses the most common (and potentially serious) situation does not mean that § 101(24) does not apply to other permanent relocation proposals. The purpose of requiring a

Presidential determination for the alternative of permanent relocation is to inform and control discretion concerning the very costly alternative of permanent relocation; our holding serves these purposes. We note that "temporary evacuation and housing of threatened individuals" is within the definition of a removal action under CERCLA § 101(23). 42 U.S.C. § 9601(24) [sic]; *Lutz v. Chroamtex, Inc.*, 718 F. Supp. 413, 419-20 (M.D. Pa. 1989); *T & E Indus.*, 680 F. Supp. at 707. However, the State's plan calls for permanent relocation under CERCLA § 101(24). *See* Appellee's Brief at 45.

Moreover, the district court's decision requiring defendants to bear the costs of permanently relocating the tenants would diminish defendant Idarado's rights under Colorado law, in the likely event that Idarado chooses to cease renting its property so that the property may be used in the cleanup effort. Under Colorado law, a month-to-month tenancy may be terminated on thirty days notice. Colo. Rev. Stat. § 38-12-202(d) (1989 Supp.); *Hurricane v. Kanover, Ltd.*, 651 P.2d 1218, 1222 (Colo. 1982). The contended-for judicial rule, that recovery of "permanent relocation" costs is permissible without reference to extant property interests, is a call for abrogation of State-created property interests which the statute or legislative history of § 101(24) does not support. Under the district court's approach, Idarado gets only the burdens of the tenancies, without the obvious benefit that month-to-month tenancies provide should the State perform the plan. The district court's approach would lead to the odd result that, having permanently relocated all the tenants and incurring massive capital expenditures, Idarado would bear the risk that any or all of the tenants could

terminate on thirty days notice. CERCLA does not require such fleecing.

REVERSED and REMANDED. Upon remand, the district shall VACATE its mandatory injunction requiring the defendants to perform the State's cleanup plan (as modified) and VACATE its prohibitory injunction concerning the relationship between Idarado and its tenants in the Pandora Trailer Park.

APPENDIX B

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLORADO

CASE NO. 83-C-2385

STATE OF COLORADO,

Plaintiff,

v.

IDARADO MINING COMPANY, et al.,

Defendants.

MEMORANDUM OPINION AND ORDER

CARRIGAN, J.

Plaintiff State of Colorado instituted this declaratory judgment action pursuant to 28 U.S.C. § 2201 asserting claims under the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. §§ 9601 *et seq., as amended by* the Superfund Amendments and Reauthorization Act of 1986 ["SARA"], Pub. L. No. 99-499, 100 Stat. 1615 (1986) (collectively "CERCLA") and under the Toxic Substance Control Act, 15 U.S.C. §§ 2601 *et seq.*, ("the TSCA"). Plaintiff seeks to impose liability against the defendants for the cleanup of hazardous wastes and for natural resources damage at and near the defendants' mine and milling facilities located between Ouray and Telluride, Colorado. Defendants are Idarado Mining Company, Newmont Mining Corporation ("Newmont Mining") and Newmont Services Limited ("Newmont Services"), all owners and operators of the Idarado Mine. (For convenience only, these defendants may be

referred to collectively as "Idarado" in this opinion. Maps of the area at issue are appended as Exhibits A, B and C.)

Pursuant to CERCLA § 107(a)(1)-(4)(A) and (D), [42 U.S.C. § 9607(a)(1)-(4)(A) and (D)], the State has sued to recover its response costs incurred and to be incurred in the cleanup of past and ongoing releases of hazardous wastes at the mining site. Plaintiff state also seeks an injunction under CERCLA § 121(e)(2), [42 U.S.C. § 9621(e)(2)] to implement certain remedial actions it proposes to effectuate the cleanup process. In addition, pursuant to CERCLA § 107(a)(4)(C), [42 U.S.C. § 9607(a)(4)(C)], the State has sued for damages for destruction of natural resources. Finally, the State seeks an injunction under the TSCA compelling the defendants to remedy the adverse environmental consequences caused by their allegedly illegal mishandling of polychlorinated biphenyls ("PCB's") at the site.

I earlier granted the State's motion to bifurcate trial on the claim for natural resources damage. The State's claims under the TSCA and the CERCLA response costs were tried to the court over twenty-six trial days. This opinion constitutes my findings of fact, conclusions of law and order as to the matters tried, pursuant to Rule 52, Fed. R. Civ. P.

I. Scope of Liability Under CERCLA § 107(a), [42 U.S.C. § 9607(a)].

To establish liability under CERCLA, the State must prove that (1) the defendants are owners or operators (2) of a facility (3) from which there has been a release or a threatened release, of a hazardous substance that causes

response costs to be incurred. *State of Colorado v. ASARCO, Inc.*, Civil Action No. 83-C-2383, Slip Op. at 2 (D. Colo. Nov. 27, 1985). Defendant Idarado Mining Company has admitted that it is an owner and operator of the Idarado Mine. In a previous order, I ruled that, for purposes of CERCLA liability, Newmont Mining was both an owner and an operator, and that Newmont Services was an operator, of the Idarado property and sites at issue.

Moreover, I have previously determined that the defendant Idarado Mining Company is liable to the State under CERCLA § 107(a), [42 U.S.C. § 9607(a)] for the release, or threatened release of a hazardous substance from a facility that has caused the State to incur response costs. That holding applies equally to the liability of Newmont Services and Newmont Mining.

Generally, CERCLA authorizes the United States Environmental Protection Agency ("USEPA") to undertake pollution abatement and cleanup efforts and then seek reimbursement for cleanup costs from responsible parties. The National Contingency Plan ("the NCP"), 40 C.F.R. Part 300 (1986), prepared by the USEPA, outlines the administrative process that governs these cleanup efforts by establishing procedures and standards applicable to the response actions.

Like the USEPA, states can sue responsible parties to recover remedial and removal costs. To prevail, a State's response efforts must be "not inconsistent with the NCP." *United States v. Northeastern Pharmaceutical and Chem. Co.*, 810 F.2d 726, 747 (8th Cir. 1986); *State of New York v. Shore Realty Corp.*, 759 F.2d 1032, 1041 (2d Cir. 1985); *State ex rel. Brown v. Georgeoff*, 562 F.Supp. 1300, 1315 (N.D. Ohio

1983). CERCLA § 121(d)(1), [42 U.S.C. § 9621(d)(1)], provides that:

> "Remedial actions selected under this section . . . shall attain a degree of cleanup of hazardous substances, pollutants, and contaminants released into the environment and of control of further release at a minimum which assures protection of human health and the environment. Such remedial actions shall be relevant and appropriate under the circumstances presented by the release or threatened release of such substance, pollutant, or contaminant."

Pursuant to the NCP, a detailed environmental investigation of the area is performed and the feasibility of various remedial alternatives is analyzed. The Remedial Investigation ("RI"), or first component, determines the nature and extent of the harm caused or threatened by the release of hazardous substances into the environment at a site. The Feasibility Study ("FS"), or second component, is the evaluation of proposed remedies. These two components are interdependent and may be conducted concurrently.

CERCLA § 121(d)(2)(A), [42 U.S.C. § 9621(d)(2)(A)] requires that applicable or relevant and appropriate federal and state environmental and public health requirements be identified and applied to the response action undertaken at the site. Under the NCP, 'applicable requirements' mean "those Federal requirements that would be legally applicable, whether directly, or as incorporated by a Federally authorized State program, if the response actions were not undertaken pursuant to CERCLA section 104 or 106." 40 C.F.R. § 300.6. Also, pursuant to 40 C.F.R. § 300.6,

> "[r]elevant and appropriate requirements are those Federal requirements that, while not 'applicable,' are designed to apply to problems sufficiently similar to those encountered at CERCLA sites that their application is appropriate. Requirements may be relevant and appropriate if they would be 'applicable' but for jurisdictional restrictions associated with the requirement."

After notice and an opportunity for public comment, a comprehensive remedial action plan appropriate for the site as a whole is selected utilizing the data gathered from the RI/FS activities. The final remedy selected for the site is issued as the Record of Decision ("ROD"). CERCLA § 121(d)(2)(A)(ii), [42 U.S.C. § 9621(d)(2)(A)(ii)]; 40 C.F.R. §§ 300.68(i)(1), 300.71(a)(2)(ii)(B) and 300.71(a)(4).

CERCLA § 121(a), [42 U.S.C. § 9621(a)], requires that the governmental response be "cost-effective," taking into consideration total long and short term costs, including costs of operation and maintenance. Pursuant to 40 C.F.R. § 300.68(i), the NCP provides that:

> "(1) The appropriate extent of the remedy shall be determined by the . . . selection of a cost-effective remedial alternative that effectively mitigates and minimizes threats to and provides adequate protection of public health and welfare and the environment. . . . [T]his will require selection of a remedy that attains or exceeds applicable or relevant and appropriate Federal public health and environmental requirements that have been identified for the specific site."
>
> "(2) In selecting the appropriate extent of the remedy from among the alternatives that will achieve adequate protection of public health and welfare and the environment in accordance with § 300.68(i)(1), the lead agency will consider

cost, technology, reliability, administrative and other concerns, and their relevant effects on public health and welfare and the environment."

"(3) If there are no applicable or relevant and appropriate Federal public health or environmental requirements, the lead agency will select that cost-effective alternative that effectively mitigates and minimizes the threats to and provides adequate protection of public health and welfare and the environment, considering cost, technology, and the reliability of the remedy."

"(4) Pertinent other Federal criteria, advisories, and guidance and State standards will be considered and may be used in developing alternatives, with adjustments for site-specific circumstances."

* * *

Determining the appropriate removal and remedial action involves specialized knowledge and expertise. Where the federal government has sued polluters, the courts have recognized that the choice of a particular cleanup method is within the USEPA's discretion, and the applicable standard of judicial review is whether the agency's decision is arbitrary and capricious. *United States v. Northeastern Pharmaceutical and Chem. Co.*, 810 F.2d at 748; *United States v. Ward*, 618 F.Supp. 884, 900 (E.D. N.Car. 1985). *See also*, CERCLA § 113(j)(2), [42 U.S.C. § 9613(j)(2)]. By analogy, this reasoning would seem to apply to actions initiated by the states, at least after a threshold showing of expertise in the state lead agency. Nevertheless, at a pretrial hearing, I indicated that I also would review the State's response plan on the merits.

Pursuant to CERCLA § 113(j)(3), [42 U.S.C. § 9613(j)(3)], if the court determines that the selected response action was arbitrary, capricious, or otherwise not in accordance with the law, "the court shall award (A) only the response costs or damages that are not inconsistent with the National Contingency Plan, and (B) such other relief as is consistent with the National Contingency Plan." Thus, it is within my authority to modify the State's proposed plan or, alternatively, remand the matter to the State for further study. Costs or damages may be disallowed if serious procedural errors were made relating to matters of significant relevance. CERCLA § 113(j)(4), [42 U.S.C. § 9613(j)(4)].

I have previously ruled that the defendants bear the burden of proving that the State's selected remedial plan and response costs incurred are not consistent with the NCP. *See, United States v. Ward*, 618 F.Supp. at 901; *United States v. Northeastern Pharmaceutical and Chem. Co.*, 579 F.2d at 747. The focus of this lawsuit is on that narrow issue.

As I ruled in *Colorado v. ASARCO, Inc., supra*, Congress mandated that the parties responsible for environmental pollution be held strictly liable for governmental costs incurred in responding to clean up hazardous waste and for natural resource damage, regardless of fault. *See also United States v. Ottati & Goss, Inc.*, 630 F.Supp. 1361, 1401 (D. N.H. 1985). The government is not required, however, "to match the waste found to each defendant as if it were matching fingerprints." *United States v. Ottati & Goss, Inc.*, 630 F.Supp. at 1402. The defendant polluter

must have deposited his waste at the site, and the hazardous material found in that waste also must be present at the site. *Id.*

This strict liability standard, however, is not absolute. Under CERCLA § 107(b), [42 U.S.C. § 9607(b)], available defenses include acts of God, acts of war, and acts or omissions by third parties other than the defendants' employees or agents, or other persons whose causal acts or omissions occur in connection with a contractual relationship with the defendants. *State of New York v. Shore Realty Corp.*, 759 F.2d at 1042. The available defenses thus are strictly defined by statute.

Defendants here asserted the additional defenses of laches, estoppel, failure to mitigate damages and the State's encouragement of mining, but at trial produced no adequate evidence to support any of these purported defenses. Thus, while I have concluded that these "defenses" are not available under the statute, I further find and conclude that even if they were available none of them has been established by the evidence.

With respect to suits involving several defendants, I have held that the removal and remedial action liabilities imposed by CERCLA § 107(a), [42 U.S.C. § 9607(a)] are joint and several. *State of Colorado v. ASARCO, Inc.*, Case No. 83-C-2388 (D. Colo., Order of May 13, 1985). *See also United States v. Northeastern Pharmaceutical and Chem. Co.*, 810 F.2d at 742-44. Moreover, since SARA, CERCLA § 113(f)(1), [42 U.S.C. § 9613(f)(1)] expressly provides for the right to contribution in cases of multiple liability.

During trial, I denied the defendants' several motions to dismiss this action on the asserted grounds

that the State was not entitled to a declaratory judgment or to injunctive relief. CERCLA § 113(g)(2), [42 U.S.C. § 9613(g)(2)], indicates that a declaratory judgment may be entered, where appropriate, in government initiated cost-recovery actions. *See also State ex rel. Brown v. Georgeoff*, 562 F.Supp. at 1316 (declaratory judgment available to State in suit filed prior to SARA).

The State has incurred initial response costs as a result of its remedial investigation conducted at the Idarado site. The defendants have challenged the results of the State's investigation and proposed remedy. A substantial controversy exists between the parties and the matter is now ripe for decision. CERCLA § 121(e)(2), [42 U.S.C. § 9621(e)(2)], added by SARA, provides that "A State may enforce any Federal or State standard, requirement, criteria, (sic) or limitation to which the remedial action is required to conform under this Chapter in the United States district court for the district in which the facility is located." Thus injunctive relief also is available to the State under CERCLA.

II. Overview of the Site.

The Idarado Mine ("mine" or "site") is located in San Miguel, Ouray and San Juan Counties in southwestern Colorado. Idarado currently owns 10,574.46 acres, or 16.5226 square miles, of the property in this area. The property consists largely of patented and unpatented mining claims, and generally includes the adits, shafts, underground mine workings, mine portals, mine waste rock, and tailings ponds. The site involves three distinct

natural areas: (1) the Telluride Valley, (2) the Red Mountain area, and (3) the High Country between the two.

A. The Telluride Valley.

The Telluride Valley is a box canyon. Defendants' mining and milling facilities are located near the canyon head. The Town of Telluride is located downstream from the mine and mill, toward the open end of the canyon below. The San Miguel River originates in the mountains at the closed upper end of the canyon and flows downward through Telluride. The San Miguel increases in size as it is supplemented by tributaries over its 81 mile length until ultimately it empties into the Dolores River near Uravan, Colorado.

The Telluride Valley portion of the Idarado Mine (elevation approximately 9,062 feet) includes two mine openings, or portals, called the "Mill Level Tunnel" and the "Meldrum Tunnel," located at the valley head. Next to the Mill Level Tunnel is the Pandora Millsite, which includes a former mill, support buildings and storage areas. Four infiltration lagoons are located up the valley from the Millsite. Below the Millsite, and adjacent to the San Miguel River, are four consecutive tailings piles (piles nos. 1, 2, 3 and 4), and one very large merged or combined tailings pile (pile no. 5/6). All of these tailings piles are a short distance up the San Miguel river valley from the Town of Telluride. The tailings piles contain deposits of ground mine rock that remain after most of the valuable metals have been removed by milling.

At the lower end of the valley, below the Town, is an area along the San Miguel River known as "Society

Turn." Tailings piles are located near Society Turn and other locations along the San Miguel River as it flows down the valley. These tailings are approximately five miles or more downriver from the Pandora Millsite.

B. The Red Mountain Valley.

The Red Mountain Valley portion of the mine (elevation 10,650 feet) is located in an uninhabited area adjacent to State Highway 550 and approximately twelve miles southwest of the Town of Ouray. It includes a mill complex of administrative offices and shop areas comprising the Red Mountain yard. Downgradient from the Red Mountain yard are four tailings piles (piles nos. 1, 2, 3 and 4) adjacent to Red Mountain Creek.

The tailings pile farthest from the yard area (Red Mountain pile 4) is located at the head of Ironton Park, approximately two miles down valley from the Red Mountain mine office. Ironton Park is a marshy area that adjoins the creek for about one and one-half miles. It is located about two miles above Red Mountain Creek's confluence with the Uncompahgre River.

The Red Mountain Valley area also includes a "buried" tailings pile, the "Treasury Tunnel" mine portal, and several other scattered mines, tailings piles, mine waste rock piles and portals.

The headwaters of Red Mountain Creek originate in the Uncompahgre National Forest near the Ouray/San Juan County line, which is the forest boundary. Red Mountain Creek flows from Red Mountain Pass in a

northerly direction to its confluence with the Uncompahgre River about 2.75 miles upstream from the Town of Ouray, Colorado.

The Uncompahgre River continues its course through Ridgway, Colorado, emptying into the Gunnison River which, in turn, flows into the Colorado River near Grand Junction, Colorado.

The Red Mountain Valley and the Telluride Valley are separated by mountains. Both areas, however, are connected by a maze of horizontal mine tunnels at various depths interconnected by hoists and chutes for vertical travel of staff or movement of materials. Although the mine has not operated since about 1978, a skeleton crew maintains it and one can travel from one end to the other by underground railcar a horizontal distance of about seventeen miles. However such a trip requires several transfers from one mine tunnel level up or down to another.

C. The High Country

The High Country consists of mountain basins generally above 10,000 feet between the Red Mountain and Telluride Valleys. The High Country drains into the San Miguel River and Red Mountain Creek watersheds. Idarado owns much of the High Country land but has never carried on mining activity there. The High Country contains scattered waste rock piles, portals and relics of past mining activities by prior owners or occupants.

III. Brief History of the Idarado Mine.

The Telluride/Red Mountain area is highly mineralized, and has been extensively prospected and mined for approximately 100 years.

Idarado was formed in 1939 by Telluride Black Bear Mines, Inc., San Juan Metals Corporation, Newmont Mining Corporation and Barstow-Imogene Mines, as a corporate entity under which they consolidated several mining properties in the Red Mountain area. In 1953, Idarado purchased the Telluride Mines. Between 1954 and 1956, the Red Mountain mill was decommissioned, and the Pandora millsite, located in the Telluride Valley, was reconstructed and expanded.

From 1956 until Idarado's mining operations were shut down, all ore was run through the Treasury and Mill Level Tunnels and milled near Telluride at the Pandora Mill. Zinc, copper, lead, silver and gold were produced. In 1978, depressed metal prices necessitated cessation of Idarado's operations. In August 1986, approximately 80% of Idarado's mining and milling equipment and machinery was sold at public auction. As stated, it now retains only a skeleton crew to perform maintenance at the site. During its years of operation, Idarado had a net income of $130 million.

IV. The State's Remedial Investigation.

In 1984, the State, through the State Attorney General's office, entered into contracts with independent environmental consultants to develop or assist in the development of the Remedial Investigation, Feasibility

Study and Record of Decision regarding the Idarado Mine. These consultants acted under the direction of several state officials.

The Remedial Investigation included a review of historical records with respect to mining and milling operations and a field investigation. That investigation consisted of sampling all environmental media, including the soil, air and water at the site, and determining the sources, pathways and receptors of contaminants.

A Feasibility Study was conducted to analyze the remediation alternatives. Initially, the State's consultants began with over 200 different possible response actions. These alternatives were screened using the following factors: technical feasibility, practicality, technical reliability, applicability, environmental effectiveness, short and long term benefits, adverse impact, health effects, and costs. Six alternatives ultimately were selected for each side of the mountain.

The State issued the RI and FS for public comment. Public meetings were held at Telluride and Ouray, and comments were received.

Next, a Preliminary Record of Decision was prepared as a preliminary draft of the State's decision regarding remedial action. The State's consultants then performed cost analyses and environmental effectiveness analyses with respect to the proposed remedies. The cost analyses were obtained by standard engineering and construction practices and other methods approved by the USEPA's FS guidance documents.

Finally, the State issued its Record of Decision as its final remedial action decision with respect to the Idarado site. The Colorado Department of Health served as the lead agency in the ROD's preparation. This ROD document was admitted as a trial exhibit.

V. Areas of Contamination at the Idarado Facility, the Parties' Proposed Remedies and the Court's Selected Remediation Plan.

The State has identified three main sources of metals contamination at the Idarado Facility: tailings, mine drainage and waste rock. Tailings are the waste products from the milling process and are composed of finely crushed and ground waste rock containing the small fraction of metals not recovered during milling as well as chemical reagents and water used in the milling process. Water, including water from rain, snow, underground sources, and the mines, flows across and through the tailings, eroding the tailings piles and picking up metals to be deposited in the area's rivers and creeks. The waters that flow over and through the tailings contain cadmium, copper, lead, zinc, and in some instances, arsenic, chromium, nickel and silver. All of these metals are hazardous substances within the meaning of CERCLA § 101(14), [42 U.S.C. § 9601(14)].

Water flows out of mine portals and crosses waste piles, where it picks up metals and hazardous materials on its downward course, ultimately carrying hazardous waste and metals into the area's streams.

With respect to the proposed remediation plans, I heard separately the evidence as to each contamination

source or affected area. The evidence was presented in the following order: (1) the Telluride tailings piles; (2) the Telluride soils; (3) the Society Turn tailings; (4) the mine portal discharges and mine waste rock; (5) the millsite cleanup; (6) the miscellaneous tailings along the San Miguel River, stream bank cleanup and habitat enhancement; and (7) the Red Mountain tailings. Evidence also was presented on the State's proposed monitoring system. I now will address (albeit not in the order above listed) each of the specific contamination sources or affected areas, discussing the parties' respective proposals for remediation addressed to each source or area. As to each I will then state my findings and conclusions with respect to each source or area.

(A) The Telluride Tailing Piles.

On the Telluride side, there are six large tailings piles located near the Pandora Millsite.

Piles one through four contain between 431,000 and 807,000 dry tons of tailings and cover a surface area of between 14.3 and 18.1 acres. Considered individually, pile 1 contains approximately 72,000 dry tons of tailings and covers a surface area of approximately 1.4 acres; pile 2 contains approximately 214,000 dry tons of mine tailings and covers a surface area of approximately 2.2 acres; pile 3 contains approximately 327,000 dry tons of mine tailings and covers a surface of approximately 6.1 acres; and pile 4 contains approximately 194,000 dry tons of mine tailings and covers a surface area of approximately 4.6 acres. Tailings were deposited in these piles between 1938 and 1944. Piles 1 and 2 have an average height of fifteen

to thirty-five feet. The average height of piles 3 and 4 is thirty-five feet.

The "merged" tailings pile formed from combining piles 5 and 6 is approximately 100 feet high. It contains approximately ten million tons of tailings and covers between fifty and sixty-five acres. Tailings were deposited in pile 5 between 1944 and 1952, and between 1955 and 1978. Pile 6 received tailings deposits between 1955 and 1976.

The metals concentration in piles 1 through 6 varies, but all piles contain cadmium, copper, lead, zinc, silver, chromium and arsenic. Piles 5 and 6 contain 30 million pounds of lead and zinc, over five million pounds of arsenic and over two thousand pounds of cyanide.

The Telluride tailings piles are not lined and were not required to be lined when they were constructed. All six piles are the result of mining and milling activities at the Idarado mine. No newly mined tailings have been added to these piles since milling ended in 1978.

Oxidized acidic "hot spots" occur in the tailings where water is seeping out from the piles' sides or near the basins of the tailings. Materials that are oxidized are generally more soluble in water and thus are more mobile in the environment. When water contacts the tailings, hazardous substances are released into the water. These six tailings piles are eroded by water caused by precipitation, snowmelt and flood events. The piles show evidence of erosion gullies. As a result, tailings have flowed directly into the San Miguel River, contaminating its sediments. Tailings constitute the majority of sediment within the San Miguel stream bed along piles 5 and 6. Sediment

contamination extends as far as the confluence of the San Miguel with its South Fork.

Water from run-on, snowmelt and precipitation flows off the tailings piles, and seeps from the piles' side slopes. The water carries high concentrations of heavy metals, including lead and zinc, leached from the tailings. Metal sampling in the San Miguel River has indicated heavy metal concentrations, including lead and zinc, over the stream reach from above pile 1 to below pile 5/6.

Hazardous substances also are released into the ground water from the six piles as a result of rain and snow melt. The ground water is eventually discharged into the San Miguel River.

Concentrations of zinc, cadmium and copper in the San Miguel River were relatively low upstream but increased downstream past the Pandora Mill site. The high zinc concentration and the other heavy metals in the surface water and sediments in the San Miguel River have resulted in significant degradation of the water quality as a habitat for aquatic life.

In the fall of 1985, the defendants' experts, assisted by the State's experts, conducted a fish population estimate by electro-shock fishing. The greatest number of fish, insects and algae were found at the upstream edge of the San Miguel River, below Bear Creek. Bear Creek is a San Miguel tributary that enters the river from the south below tailings pile 5/6 near the Town of Telluride. Lower numbers of fish, insects and algae were found in the smaller tributaries of the upper basin and in the headwaters of the San Miguel River, upstream from Bear Creek and adjacent to Idarado's property. There was

some evidence that natural barriers preclude fish migration.

Brook trout, the resident fish, were located in the San Miguel River below Bear Creek. The State's evidence indicated that the fish population survives there because the inflow from Bear Creek dilutes the heavy metal load, and because the brook trout has been able to adjust to stream waters with increased metal content. Brook trout are fairly resistant to metals compared to other kinds of trout. Liver tissue samples taken from fish indicated elevated metal levels, and elevated cadmium and lead levels were found in their other tissues. The metal levels in San Miguel fish were 6 to 6,000 times higher than the metal concentrations found in fish from Lake Powell (a large recreational lake located across the Arizona-Utah border). But for the metals concentration in the San Miguel River, cut-throat, rainbow and brown trout would be expected to be present. Toxic effects of metals on aquatic life include death, growth reduction, diminished egg hatchability and, in the case of lead, deformities as well as breakdowns in the metabolic system.

Lower insect density on the river corresponded to the lower fish density. Plant life density in the San Miguel River also decreased substantially downstream from the tailings piles, and this too is attributable to the presence of heavy metals.

Flooding occurred in the Telluride Valley in 1911, 1914, 1923, 1927, 1964 and 1966. Future flooding of the San Miguel River would cause more tailings pile erosion and additional releases of hazardous metals into the River.

The six tailings piles also are continually eroded by wind. Blowing tailings contaminate soils and surface water with cadmium, lead, zinc and copper. Water is sprinkled on pile 5/6 as part of Idarado's dust control program. A portion of that water infiltrates the tailings, enters the ground water and eventually flows into the San Miguel.

Tailings are blown into the Town of Telluride, producing a whitish-gray dust cloud that deteriorates the air quality. Tailings also have been used as "fill" on Telluride properties and as ditch linings when sewer and water lines have been laid in the town.

In 1977, the Town of Telluride constructed two wells downgradient from pile six. The concentration of chromium in Telluride's drinking water wells was elevated during the late 1970's because of a slug release of chromium from pile 5/6. However, chromium concentrations in those wells have decreased steadily and they are now within drinking water standards.

Tests indicated that tailing pile 5/6 is "EP toxic," meaning that it contains high concentrations of lead. The EP toxicity test identifies wastes that are capable of posing a substantial hazard to the public health and environment when improperly managed.

The State has determined in its Record of Decision that all activities must comply with the Colorado Water Quality Control Act, C.R.S. §§ 25-8-101 through 25-8-612 (1986). Stream classification and water quality standards apply for all pollutants except that certain numeric standards for zinc and lead have been selected for the San Miguel River. The State also has determined that all point

source discharges must, at a minimum, meet effluent limitations and Colorado Discharge Permit System Requirements, and that the antidegradation and basic standards of 5 CCR 1002-8, at 3.1.8 and 3.1.11 (1-84) apply to all surface water.

Regarding ground water, the Record of Decision indicates that the Colorado Safe Drinking Water authorities [C.R.S. §§ 25-1-107(1)(x) and (y); 25-1-114 - 25-1-114.1 (Supp. 1986)], and the Colorado Primary Drinking Water Regulations apply to ground water at the site that may be a source of municipal water supplies. The Basic Standards for Ground Water [5 CCR 1002-8, at 3.11.0 to 3.11.9 (1-87)] also are applicable.

Based on the evidence presented, I find and conclude that the Telluride tailings piles 1 through 6 contain hazardous substances as defined under CERCLA § 101(14), [42 U.S.C. § 9601(14)], and that the release of those hazardous substances poses a threat to and has harmed the public welfare and the environment in the Telluride Valley. As a result the State has incurred response costs. I further find that the San Miguel River and the area ground water are contaminated because of the presence of these hazardous substances that have caused endangerment and injury to aquatic life. I conclude that the San Miguel River contamination violates applicable, or relevant and appropriate State standards. I further conclude that the releases of hazardous substances from the Telluride tailings piles constitute one source of this contamination and that a cleanup remediation plan must be implemented.

(i) The State's Proposed Plan.

Generally, the State's Plan for the Telluride tailings piles calls for isolating the approximately ten million tons of tailings in piles 1 through 6 to prevent tailings dispersal into the environment. The plan consists of:

(a) consolidating piles 1 through 4 at the location of pile 5/6;

(b) constructing a multilayer cap on the consolidated tailings;

(c) constructing surface water run-on diversion ditches; and

(d) constructing flood control measures designed to withstand the probable maximum flood event to protect the consolidated tailings impoundment from erosion and structural failure.

With respect to the piles consolidation aspect, after removal of the tailings, original soil material beneath the piles would be removed to approximately a one foot depth. The tailings would be moved by conveyor, trucks or both. The conveyor would cross the San Miguel River, using standard supports or culverts. To prevent discharging tailings into the environment while they are being moved, the State proposes using a pipeline conveyor system that encapsulates the moving tailings.

The multilayer cap covering the ultimate consolidated pile or piles would consist of a low permeability layer, an erosion resistant layer and a growth media layer. As proposed, the low permeability layer would retard the downward movement of water through the piles and would thus reduce tailings oxidation and the leaching of

hazardous substances from the tailings by water, thereby preventing, or at least minimizing, any further metals loading to surface and ground water. This layer also would reduce root penetration into the tailings, and thus prevent the uptake of hazardous substances by growing plants. The State indicated that the low permeability layer can be constructed using compacted tailings material and slimes from piles 1 through 4.

The erosion resistant layer would provide a permanent remedy to reduce long-term erosion by wind and water. This layer would consist of coarse rock material available from the Royer Gulch debris fan located on the Idarado mill site near tailings piles 1 through 4. Theoretically, the erosion resistant layer would act like a sponge, retaining water and providing moisture to the vegetative cover.

The growth media layer would consist of locally available soil and would provide for a self-sustaining plant population on top of the cap. The soil could be obtained from the Royer Gulch debris fan. The State asserts that tree roots and vegetation would aid in erosion control.

It appears undisputed that runoff and run-on diversion control structures are necessary to prevent water from running onto and standing on the tailings piles. The State contends that the appropriate diversion remedy should be designed to withstand the probable maximum flood. The probable maximum flood is defined as the largest flood that reasonably could be expected to occur in an area.

Under the State's plan, diversion control structures would be constructed on the south side of the consolidated tailings impoundment. The impoundment's base would be lined with riprap, or large rock that is available on-site. After consolidation, the tailings impoundment would be approximately 120 feet above the surface of the San Miguel River. Riprap would be placed 50 feet up the side of the impoundment so that the impoundment could withstand the effect of the probable maximum flood event.

The State estimates that execution of its plan would cost approximately $9.3 million.

(ii) Defendants' Proposed Plan.

Defendants propose stabilizing Telluride tailings piles 1 through 6 in place and revegetating the areas by applying fertilizer, manure and straw to naturally manufacture soil. In fact, the defendants have begun to implement their revegetation plan on the surfaces and slopes of piles 1 through 4, and some vegetation growth has occurred. Defendants propose using limestone to neutralize the piles' acidic "hot spots." Revegetation would reduce water flow through the piles.

Defendants plan to control erosion from direct precipitation by modifying the drainage patterns on the piles, contouring the piles' surfaces and placing riprap on the piles' side slopes. Under this plan, run-on/runoff contour ditches would be constructed for drainage and

diversion. Erosion gullies would be backfilled and covered with erosion blankets. At trial, the defendants' remedial evidence addressed the issue of protection to withstand the 100 year flood event. In subsequent papers submitted to the court, it appears that the defendants have agreed to construct flood protection for the area to withstand the 500-year flood event, but not the probable maximum flood event.

The over-all cost of the defendants' plan is estimated to be approximately $1.8 million.

(iii) The Court's Remediation Plan.

Defendants do not appear to dispute the need for cleanup of the Telluride tailings piles, or their liability for that cleanup. Thus the issue is the scope of that cleanup.

At trial I expressed my concerns about the cost of the State's proposed remedy, and the disturbing and possibly dangerous side effects of transporting huge amounts of tailings, some by truck through the town. Specifically, I am concerned about tailings being released into the air, water and environment, even though the State's plan contemplates an encapsulated conveyor system to transport the tailings for consolidation. Clearly tailings consolidation to the degree suggested by the state would severely disrupt the Town of Telluride and the entire valley because of heavy construction traffic, and other factors, for an indefinite time. Based on the evidence presented from both sides, a remediation plan such as the State's, designated to prevent contamination and insure protection of the environment against even the worst of

all imaginable or possible natural catastrophes does not appear to be technically feasible or necessary. CERCLA requires that the plan be cost-effective, taking into consideration long and short-term costs, operation and maintenance.

I conclude that certain components of the State's plan, *i.e.*, moving and consolidating the tailings piles and use of a six-foot multilayer cap, do not comport with CERCLA's overall scheme and goal of achieving acceptable health and environmental protection. Nor is the state's plan for consolidating tailings piles cost-effective. In sum, the State's plan would go too far.

On the other hand, I conclude that the defendants' proposed plan does not go far enough. While stabilizing these enormous tailings piles in place appears feasible, doing so by merely "manufacturing" soil from mulch to achieve revegetation is neither practical nor likely to succeed.

I asked the parties to submit alternatives to their proposals presented at trial. I find and conclude that the State's alternative proposal best satisfies CERCLA's aims. Generally, this alternative plan calls for stabilizing the six tailings piles in place and constructing a multilayered cover on each pile using locally available material. The cover would contain a two-foot thick erosion resistant (random fill) layer, amended by bentonite, and topped by a plant growth media layer that is also two feet thick. The sides of the combined tailings piles 5 and 6 would be similarly covered, but without the bentonite, and a self-sustaining vegetative cover would be established on the top.

Drainage and erosion control structures as described by the State, would be utilized. They would be designed to withstand the 500-year flood event and the forces of a maximum credible earthquake. Flood protection design would encompass the San Miguel River, Royer Gulch and Marshall Creek. Monitoring activities for the Telluride tailings piles would include surface water, ground water, soils, vegetation, erosion, and construction aspects as outlined in the State's alternative plan.

The State is ordered to submit, within thirty days, a cost estimate for executing its alternative plan for these tailings piles.

(B) The Society Turn Tailings.

The three Society Turn tailings piles are situated adjacent to the San Miguel River in the immediate vicinity of the Highway 145 intersection. The three piles, each located at the site of a glacial moraine and mostly barren of vegetation, contain a total of approximately 120,000 to 160,000 tons of tailings.

These man-made tailings piles were formed around 1900 when tailings were impounded behind wooden timber dams that trapped the tailings previously deposited upstream. The tailings settled in the calmer waters behind the dams. Later, when the dams were breached or removed, the San Miguel River, the natural course of which had run through the tailings piles, returned to its channel and washed out a renewed channel through the tailings. The remaining tailings form the Society Turn tailings.

At Society Turn there are three tailings piles, one upstream and two downstream. The upstream tailings pile is one to five feet deep, and the first downstream pile is up to fifteen feet deep. These two piles contain approximately 90 to 95 percent of the total Society Turn tailings. The third, or westernmost, downstream pile contains the remainder.

The estimated total volume of tailings at Society Turn is about 145,000 cubic yards. River meander continues to erode the piles, particularly during spring snowmelt each year. The Society Turn tailings contain heavy metals, including cadmium, copper, lead and zinc. Lead content is 3,338 mg/kg. The two large tailings piles are respectively, thirty-two times and four times above the EP toxicity threshold for lead. The deepest pile is EP toxic for cadmium.

The Colorado stream standards for cadmium, lead and zinc applicable to the San Miguel River are violated all the way past Society Turn. Stream bed sediments in the Society Turn area are high in metals, including zinc, copper, arsenic, cadmium and silver. In fact, the highest silver concentration in sediments for the entire reach of the San Miguel River occurs in the Society Turn area.

Sources of elevated metal concentrations in the sediments at Society Turn include previous tailings deposits in the area, and erosion and transport of tailings from the upper Marshall Basin and of materials from Idarado's six Telluride tailings piles. The materials from these six piles either wash downstream through Society Turn or are deposited in the area. Metals loading at Society Turn has occurred continuously since tailings and sediments were

first deposited there. Although metal concentrations appear to decrease as the river proceeds downstream toward Society Turn, metal toxicity increases because of the sediments and tailings, the increased silver concentrations, and the reduced role of organic materials in binding the metals.

The macroinvertebrate population at Society Turn is approximately one-tenth of the population found upstream. This indicates that the aquatic system, overall, is in poor condition and there is probably a major disruption in the aquatic food chain for all fish species.

There was evidence that the Society Turn stream area, if not polluted, should provide an excellent habitat for various trout species. However, only brook trout are present, and they are found at only half the rate of their upstream population. Because of the presence of heavy metals in the San Miguel, brook trout density is only one-third the population density predicted by the defendants' modeling analysis. There also was evidence that the cadmium and silver concentrations in sediments at Society Turn are directly toxic to rainbow trout eggs.

Defendants contend that the Society Turn tailings do not present a substantial danger to public health, welfare, or the environment. They have attempted to absolve themselves of cleanup liability by asserting that they do not own any property at Society Turn. Defendants also assert that the State cannot quantify any amount of Idarado's tailings at Society Turn, nor can the State directly identify or trace any specific tailings as having eroded from the six Telluride tailings piles and come to

rest in the Society Turn area. I find and conclude, however, that the defendants' arguments are not sufficient to absolve them of responsibility for cleanup of the Society Turn tailings.

When the Society Turn piles were first formed, the general practice among mining companies operating upstream from the area was to dump tailings into the San Miguel River or its tributaries. By 1918, as much as 1,400 tons of tailings were being dumped daily. Smuggler Union Company, Liberty Bell Gold Mining Company, and The Tomboy Gold Mines Company, Ltd. (a corporation organized under the laws of Great Britain) were among the mining companies operating at the San Miguel's headwaters during the early 1900's. All had placed tailings in the river by 1904. Smuggler Union and Liberty Bell were later acquired by Telluride Mines, Inc. Tomboy England was acquired by Tomboy Gold Mines, Inc., a Colorado corporation. In the 1950's, Idarado ultimately acquired the assets, and assumed the obligations and liabilities of, Telluride Mines and Tomboy Colorado.

None of the defendants, nor any of their associated concerns, currently own any of the property on which the remaining Society Turn tailings piles are deposited. In October 1967, however, an Idarado affiliate, on Idarado's behalf, acquired placer claims in the Society Turn area that included the upstream tailings pile. Between 1967 and 1971, Idarado rechanneled the San Miguel River upstream from the Society Turn tailings piles. Idarado sold its placer claim property in December 1983, to Cordillera Corporation, a company not associated with the defendants.

Defendants contend that neither Idarado nor any of its affiliates disposed of tailings on that property, nor did they move or disturb any of the existing tailings at Society Turn, except as incidental to rechanneling the San Miguel. Defendants, however, do not dispute that tailings material from the six Telluride piles have eroded into the San Miguel River and have been carried downstream toward Society Turn.

As indicated in *United States v. Shell Oil Co.*, 605 F. Supp. at 1072, Congress made it clear when it initially enacted CERCLA, that generators, transporters, consumers, or dumpsite owners who have profited or otherwise benefited from commerce involving hazardous substances should bear the cleanup cost for affected areas. Under CERCLA § 107(a), [42 U.S.C. § 9607(a)], persons liable (other than a facility's current owners or operators) include past owners or operators of any facility at the time the hazardous waste was disposed; and persons who by contract, or otherwise, arrange for the disposal of hazardous substances by another party at a facility. CERCLA § 101(9)(B), [42 U.S.C. § 9601(9)(B)] defines "facility" as "any site or area where a hazardous substance has been deposited, stored, disposed of, or placed, or otherwise come to be located. . . . "

Contaminated tailings deposits have "come to be located" in the Society Turn area because tailings were "released" into the San Miguel River and ultimately settled there behind the dams and in the river's sediments. (See CERCLA § 101(22), [42 U.S.C. § 9601(22)] for the definition of "release," which includes "spilling," "discharging," "injecting," "escaping," "dumping" or "disposing" into the environment). These tailings areas are

the result of dumpings by Idarado's predecessor mining companies, for whom Idarado assumed all debts, liabilities and obligations, at the time of acquisition in the 1950's. Idarado continued its mining operations in the area until 1978.

Moreover, Idarado, through its subsidiary, previously owned property at Society Turn that included the upstream tailings area. The evidence is undisputed that the Society Turn tailings piles have eroded in the past and continue to erode, into the San Miguel River. Tailings from the defendants' six Telluride piles also have eroded, and continue to erode, into the San Miguel. This erosion releases heavy metals into the waters and sediments. Defendants are liable in part as past owners and operators of a "facility" at the time of waste disposal. CERCLA § 107(a)(2), [42 U.S.C. § 9607(a)(2)]. They also are liable because they "otherwise arranged for . . . disposal," of hazardous waste by placing their contaminated tailings in the San Miguel River and those tailings "have come to be located" at Society Turn. CERCLA § 107(a)(3), [42 U.S.C. § 9607(a)(3)].

As I earlier indicated, the State is not required to match specific waste found to a particular defendant, nor is strict proof of causation required. *See United States v. Otatti* [sic] *& Goss, Inc.*, 630 F. Supp. at 1402; *State of New York v. Shore Realty Corp.*, 759 F. 2d 1032, 1044 (2d Cir. 1985).

In sum, the evidence establishes that the defendants "released" contaminated tailings that "have come to be located" at Society Turn, and that are being "released" from Society Turn, a "facility" previously owned by the

defendants. The release of contaminated waste from this area is posing a threat to the environment and to the public welfare for which the State has incurred response costs. Defendants thus are liable under CERCLA for those response costs and for cleaning up the affected area.

(i) The State's Proposed Plan.

The keystone of the State's plan is the removal of the tailings from the area of active erosion to a hydrologically and geologically suitable disposal site within one mile of the tailings' present location. The tailings will be consolidated at this new site and placed in a lined impoundment. The State has suggested using Mancos shale to construct the liner because it is indigenous and generally suitable for the intended purpose. The soils beneath and adjacent to the old tailings site will be cleaned to 1,000 parts per million ("ppm") lead or less. During trial, the State initially proposed consolidating the Society Turn tailings piles onto Telluride tailings piles 5 and 6. That preliminary proposal was changed, however, after the public voiced objections because implementing it would have necessitated substantial truck traffic along the highway and through the Town of Telluride to transport the Society Turn tailings upstream.

The State now proposes constructing a multilayer cap six feet deep on top of the consolidated tailings, using material excavated from the selected disposal site. The cap's design would include the same features proposed for capping the Telluride tailings piles. The tailings

impoundment would be designed to withstand the maximum credible earthquake, probable maximum precipitation and probable maximum flood. Surface water run-on and runoff diversion ditches would be installed.

All areas disturbed by the construction activities would be recontoured and revegetated.

The State estimates that its proposed plan would cost approximately $2,580,000.

The State considered rechanneling the San Miguel River but that option was rejected because of the potential cost, the lack of permanence, and the negative feasibility based on the area's topography. Moreover, certain permits would be required from the Army Corps of Engineers. There was evidence that channelization would negatively impact the aquatic habitat and reduce aquatic biota.

As earlier discussed, none of the parties own the subject property. The State has identified several available options for gaining access to the property to implement the remedy. One option calls for the State to purchase the property at a cost of approximately $100,000 for ten acres. Other options include gaining access through negotiations with the current land owners, condemnation proceedings and state injunctive relief to abate a nuisance. The cost of obtaining property access is not reflected in the State's cost estimate.

(ii) Defendants' Proposed Plan.

Defendants have not proposed a remedial plan for the Society Turn tailings because they contend that they

are not liable for the area's cleanup. I have rejected the defendants' position in my above stated findings.[1]

(iii) The Court's Remediation Plan.

The State has not asked for a mandatory injunction requiring the defendants to begin cleanup of the Society Turn tailings. Rather, the State asks that declaratory judgment be entered in its favor addressing the scope of the cleanup effort.

Since I have determined that the defendants are liable for cleanup of the Society Turn tailings, I further conclude that declaratory relief must be entered in favor of the State. I also conclude that the State's cleanup plan shall be implemented as proposed with the following restrictions: (1) The State's plan for moving and consolidating the three Society Turn tailings piles shall be implemented, but rather than utilizing the six foot multilayer cap, the capping component shall be installed following the same guidelines as specified for capping the Telluride tailings piles. Within six months, the State shall select the site for the consolidated tailings. Selection of that site must take into consideration the objections voiced by Telluride citizens, and substantial construction vehicle traffic shall not be permitted to traverse and

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[1] Defendants at trial did submit evidence suggesting (without admitting liability) that it would be possible to divert the San Miguel River away from the tailings piles. They suggested the tailings could then be stabilized in place by covering them with natural geological (glacial morainal) material and buttressing the sides with riprap. The areas would then become revegetated by grass growing on the covering material.

disrupt the Town of Telluride or expose its people or their homes to undue traffic hazards, or blowing or dropping of tailings dust or material from trucks in or near the town. In short, a site shall be selected that would not involve hauling tailings through or near the town of Telluride.

(C) Miscellaneous Tailings along the San Miguel River, Stream Bank Cleanup and Aquatic Habitat Enhancement.

The State estimates that there are between fifty and seventy-five thousand tons of tailings material located along the stream banks of the San Miguel River between the Town of Telluride and Society Turn. Some of these tailings have vegetation covers, are mixed with soil, or have a "soil gravel cover." The "barren tailings," which the State seeks to remove, are located in unvegetated or sparsely vegetated areas. These barren tailings were deposited during times of high water, and have eroded into the San Miguel River. Defendants were once owners of the affected stream bank areas, but the land is now owned by persons not parties to this lawsuit.

These miscellaneous tailings are exposed to direct precipitation, such as rain and snow melt. At least 1,000 cubic yards of the tailings are oxidized, causing the hazardous substances to be more soluble and mobile in the environment. The State contends that these stream bank tailings cause significant metals loading to the San Miguel River, especially during storm events and whenever water leaches through the tailings. The metals that are being deposited into the San Miguel include zinc,

copper and lead. Humans, livestock and wild animals come into contact with the tailings, although there was no direct evidence of resulting health problems.

Defendants contend that the miscellaneous tailings are not responsible for elevated concentrations in, or metals loading to, the San Miguel River. There was evidence that once the San Miguel has flowed past Idarado's property, in the vicinity of Bear Creek, metals concentrations in the water decline from there on downstream. Defendants further assert that if indeed any metals contribution at all occurs from the miscellaneous tailings, it is from seepage or surface runoff (surface water washing across the tailings), or other unidentified sources, including groundwater recharge.

Defendants again emphasize that before Idarado's existence, the general practice of mining companies in the area was to dump tailings directly into the San Miguel River or its tributaries. I conclude, however, that the defendants' contention that the stream bank tailings contribute a *de minimus* amount of hazardous substances to the San Miguel River does not preclude their liability.

Defendants' six tailings piles above the Town of Telluride contribute major contamination to the San Miguel. On the average, the tailings piles contribute less than fifty per cent of the metals loading to the San Miguel River. The major contributors are the Mill Level and Meldrum Tunnel discharges. As compared to the tailings piles, however, the stream bank tailings have greater surface area per unit volume exposed to the atmosphere. Moreover, the State's evidence, and common sense, indicate that tailings are deposited on the stream banks during

times of high water. The tailings are deposited either in, or adjacent to, the river. As stated before, it is unnecessary for the State to "fingerprint" waste. *United States v. Ottati & Goss, Inc.*, 630 F. Supp. at 1402. Defendants, whose waste is located along the San Miguel River stream banks, are liable for clean up even as *de minimus* polluters. *United States v. Conservation Chemical Co.*, 619 F. Supp. 162 (W.D. Mo. 1985).

(i) The State's Proposed Remedy.

Generally, the State's plan would require removal of tailings from stream banks that are not vegetated or that are sparsley vegetated. The State, however, has not clearly identified the areas targeted for tailings removal. The removed tailings would be deposited on the Telluride or Society Turn tailings piles. Disturbed areas would then be revegetated.

The State proposes removing the tailings with a track-mounted backhoe, and hauling them away in dump trucks. The State estimates that, using ten-yard capacity trucks, it will take approximately 5,000 truck loads to remove the 50,000 cubic yards of tailings. Approximately ten percent as many truck loads will be required to haul the cover material to the affected areas.

The aquatic habitat will be restored and improved, and fish, including species other than brook trout (brown and rainbow trout), will be stocked in the San Miguel River, between Bear Creek and Society Turn. All habitat improvements will be designed to allow for channel stability at flows of up to the one hundred year flood level.

Much of the land along the river is owned by Cordillera Corporation, not the defendants. However, the State asserts that access to the affected stream banks is available from several side roads, and that an abandoned railroad berm that extends for almost the full stretch of the river can be used. In areas where there are no roads to the river, tailings would be loaded on sleds and the sleds would be hauled by backhoe to truck loading points on the nearest road.

The State estimates that its plan will cost approximately $582,000.

(ii) Defendants' Proposed Plan.

Defendants did not submit a proposed remedy for this area. However, the defendants suggest that it would be feasible to vegetate the barren tailings deposits in place. Defendants also have challenged the State's plan on several grounds.

First, the defendants contend that roads are not available to provide access to all areas. Nor has the State presented any evidence that it has obtained, or could obtain, access rights.

Next, the defendants argue, the State has not quantified the extent of the environmental disturbance that would result from the extensive hauling activities required. Defendants contend that it would be necessary to remove trees and other vegetation existing on private property, and that vehicles would have to be driven across the San Miguel River, or bridges would have to be

constructed, causing a significant adverse impact on the environment.

In sum, the defendants assert that the State's plan is not cost-effective, nor is it the least environmentally disruptive alternative.

(iii) The Court's Remediation Plan.

Since I have found and concluded that the defendants are liable for the environmental harm caused by the miscellaneous tailings, a cleanup remedy must be implemented. I am persuaded by the evidence that the State's general cleanup proposal recommending tailings removal, revegetation of affected areas, and general habitat enhancement will be effective in restoring the environmental balance to these areas, and reflects, overall, the most cost-effective available remedy.

The State's plan, however, is deficient in several respects. To remedy these deficiencies, the State, within ninety days of this order, shall provide to the court a more specific plan that: (1) identifies the areas of tailings removal, the site where removed tailings will be deposited, and the areas to be revegetated; (2) sets forth the methods by which the State will gain access to the affected areas; and (3) addresses the extent of environmental disturbance that will result from the State's construction activities. The State also shall submit, within ninety days, a revised cost estimate of its proposed remedial activities.

(D) Telluride Soils.

In 1986, the State, using a grid pattern, sampled the soil at approximately 100 locations within the Town of Telluride. Surface and depth samples were taken, focusing on high soil contact areas such has [sic] day care centers and playgrounds. In approximations, 30% of the samples indicated soil lead levels over 500 ppm (parts per million), 20% indicated soil lead levels over 1,000 ppm, and the remainder of the samples indicated soil lead levels below 500 ppm. Three of ten garden soil samples contained between 500 and 1,000 ppm lead, and one sample contained over 1,000 ppm lead. Twenty-five percent of the grid samples exceeded 3 ppm cadmium.

By comparison, the background concentration of lead in Telluride soils is approximately 45 to 110 ppm, and the background for cadmium is 0.4 ppm.

Through consultation with the Colorado Department of Health and the United States Department of Health and Human Services, Center for Disease Control ("CDC"), categories were developed for ascertaining appropriate remediation levels. According to the State's evidence, soil sample groups reflecting 500 to 1,000 ppm lead require reduced human exposure through some type of remediation. The State asserts that soil lead levels that exceed 1,000 ppm require remediation by soil removal.

The State's case concerning the Telluride soils centered around the testimony of Dr. Ellen Jones Mangione, acting director of the Division of Disease Control and Environmental Epidemiology at the Colorado Department of Health. She testified concerning the health risks

posed to Telluride residents by the allegedly contaminated soil. In summary, she stated that lead is a contaminant; it is not required for life and has no biologic value.

Lead is toxic to all humans, but children, both born and unborn, are at a much higher risk than adults. Lead taken into the body can have a variety of effects. It can disrupt enzymes, interfere with nucleic acids, cause cancer in animals, and kill nerves or disrupt their ability to conduct impulses. Low exposure levels of lead can delay a child's neurological development, and can cause birth defects, low birth weights, neuropsychological abnormalities, and hearing loss. Lead exposure in adults interferes with nerve conduction and causes high blood pressure.

Dr. Mangione testified that she does not believe that current soil levels of cadmium or arsenic pose a threat to Telluride citizens. She concluded, however, that lead did pose a risk in areas where it occurs in the soil at greater than 500 ppm. The potential pathways of lead exposure in Telluride are primarily ingestion and inhalation. Children are particularly susceptible because they may eat soil or other non-food substances and they have a greater exposure in relation to body weight. Furthermore children tend to retain lead longer and excrete it less readily than adults.

The State's evidence indicated that tailings from the defendants' six tailings piles have been carried by the wind into the Town of Telluride. Tailings from the piles also have been deposited in the Town by San Miguel River erosion. Defendants have permitted tailings to be used in the Town for fill material and underground pipe

bedding. There was evidence that plants growing in Telluride soils absorb cadmium and lead in their tissues. Metals concentrations in the soils near the defendants' tailings piles are high enough to be toxic to plants, and livestock consuming the plants, on a long-term basis. Based on this evidence, the State contends that lead-bearing contaminated tailings have rendered the soils toxic and are responsible for allegedly severe health risks that threaten Telluride residents.

Defendants dispute this contention. Defendants' evidence indicated that lead in soils is attributable in part to Telluride's urbanization. Sampling locations where lead levels exceeded 500 ppm contain construction materials, paint chips, coal fragments and metal trash and debris. Lead from paint was present in measurable quantities in 75% of the children-occupied homes tested. Defendants assert that activities of the Rio Grande Southern Railroad, which once ran through the Town of Telluride, contributed to the lead deposits in the area. Coal, a lead source, was loaded and unloaded near the railroad depot in the center of town, and the soils there contain coal fragments, coal clinkers and slag. Automobile emissions, and coal and wood product combustion, also are principal lead sources.

Defendants admit that tailings from their piles have been used in the Town for sealing road surfaces, bedding of underground water pipes and for fill in grading property. There also are tailings along the banks of the San Miguel River in and near Telluride. Defendants contend that these tailings are the result of deposits by mining companies that operated near the San Miguel's headwaters before Idarado existed. They base this contention on

the fact that the tailings material is buried by approximately six inches of soil. The 1914 flood of Coronet Creek also washed tailings into the Town of Telluride.

According to the guidelines published by the Federal Center for Disease Control, an "elevated blood lead level" is defined as blood lead concentration of 25 micrograms per deciliter of blood (ug/dl) or greater. The guidelines define "lead toxicity" as a blood lead level of 25 ug/dl, or more, together with a level of 3 free erythrocyte protoporthryn ("FEP") equal to or greater than 35 ug/dl. These screening values are capable of identifying persons who are particularly at risk of suffering adverse health effects from lead. In the United States, a person's average blood lead level is approximately 10 ug/dl.

In 1977 and 1978, the Colorado Department of Health and the CDC conducted a blood lead survey in Telluride involving children between the ages of one and nine. An average blood lead level of 19 ug/dl was found.

At the defendants' request, a blood lead survey was conducted in Telluride during late October and early November 1986. The survey was conducted by the University of Cincinnati Medical School's Lead Program Project under the direction of Dr. Robert L. Bornschein. Blood samples were taken from 258 recruited persons. Of that total, ninety-four were children under seventy-two months old who comprised approximately 80% of the total number of children in that age group residing in the Telluride area. Thirty-nine children between the ages of six and nineteen years were tested. Six nursing women, eleven pregnant and seventy-six non-pregnant women,

and thirty-seven adult males also were tested. Of this total number, 150 persons lived in the Town of Telluride, twenty-six lived in the Pandora and Liberty Bell areas near the Idarado tailings piles, and eighty-two lived in down valley areas or communities west of Telluride.

The following results were obtained. All children tested had blood lead levels below 25 ug/dl. The average blood lead level for children under one year old was 5.4 ug/dl, with a range of 2 to 16 ug/dl. The average blood lead concentration for Telluride children ages one year through seventy-two months was 6.7 ug/dl, with a range of 2 to 19 ug/dl.

All adults tested also had blood lead levels lower than 25 ug/dl. None of the pregnant women had levels over 6 ug/dl. The highest level for a nursing woman was 8.5 ug/dl. There was no significant difference in distribution of blood lead levels between persons living in the Town of Telluride and those living down valley. These blood lead levels are among the lowest in the nation.

During trial on this issue, I expressed my concern that the State had not produced sufficient evidence to support its position that the toxicity of Telluride's soils demanded remedial action. Defendants, of course, had the burden of proving that the costs incurred, or to be incurred, by the State for soils cleanup in the town were not justified because arbitrary or capricious, or not according to law.

The threat of illness or disability caused by the environment should not be considered lightly. I am especially sympathetic to the concerns expressed by the citizens of Telluride on this issue. However, the State did no health

testing independent of the defendants' testing. The State produced no evidence, with the possible exception of Dr. Mangione's somewhat speculative opinions, that any Telluride area residents are ill or disabled because of exposure to lead contaminated soils, or are in danger of becoming ill or disabled.

Based on the evidence presented, I find credible the defendants' blood level sampling tests. I reject the State's assertions that the sampling evidence was not convincing because random sampling was not used and because the sampling occurred two months after the peak season for blood lead levels. I further find and conclude that the defendants' sampling established that at the time of testing Telluride area residents were not suffering significant adverse health effects from lead, such as elevated blood lead levels or lead poisoning, as a result of being exposed to the allegedly contaminated soils.

(i) The State's Proposed Remedy.

The State's proposed remedy consists of soil cleanup and health monitoring. Soils with lead levels above 1,000 ppm would be removed, if necessary, or treated. Soils with lead content between 500 ppm and 1,000 ppm would be covered, treated with lime, sodded over or disked, and/or restricted for use by institutional control such as zoning. All other soils would not be remediated.

The plan also calls for a health study of Telluride citizens. The State estimates that the soils cleanup program would cost approximately $1.77 million, and the health study would cost approximately $1.5 million.

(ii) Defendants' Proposed Remedy.

Defendants propose implementing a five year blood lead screening program for children in the community under seventy-two months of age. This program also would include iron deficiency screening. Defendants' plan includes the purchase of appropriate medical equipment for use by local physicians at a cost of approximately $4,000.

(iii) The Court's Remediation Plan.

Although I have determined that the Town's soils are not presently endangering the lives of Telluride area residents, I conclude that certain remedial action is justified. However, based on all the evidence on this issue, I find and conclude that there is inadequate proof of causation of harm to justify imposition of the State's proposed remedy and expenditure plan. I further conclude that the defendant's proposed five year monitoring plan shall be implemented regarding all residents of affected areas. Defendants shall bear the expense of this remedy.

(E) The Red Mountain Tailings Piles.

Defendants own five tailings piles on the the [sic] Red Mountain side of the mine. These piles, known as tailings piles 1 through 4, and the buried tailings pile, comprise 80% of all tailings located in the Red Mountain Creek area. Red Mountain Creek originates above these tailings sites in an area known as the National Bell Drainage, flows through the tailings area, down toward Ironton

Park, and empties into the Uncompahgre River. Tailings piles one through three are clustered together near the Idarado mine area. Tailings pile 4, the largest of the piles, is located approximately 2.5 miles downstream. These four piles contain decant overflow lines (concrete pipes connected to concrete and wooden towers) that carry off excess ponded water.

The buried tailings pile, located at a site that once was a natural lake, is upstream from the first pile near Treasury Tunnel. All five piles are close to Red Mountain Creek.

Tailings pile number 1 contains between 8,000 and 17,000 tons of tailings, has a maximum height of twenty five feet and covers 0.8 acre. Erosion gullies are present on the pile and water has eroded portions of the side slopes. Water running through tailings in this pile flow directly into a Red Mountain Creek tributary. Two 24-inch highway culverts on Highway 550 drain water onto the pile and have caused an erosion gulley [sic]. Flow from a decant tower also has caused an erosion gulley [sic].

Tailings pile number 2 is located in, and directly adjacent to, Red Mountain Creek. It contains between 369,000 and 549,000 tons of tailings, has a maximum height of twenty five feet, and covers between 9.5 to 11.2 acres. The State contends that this pile is physically and chemically unstable as evidenced by a large collapse feature, or sink hole, and a twenty five foot deep erosion gulley [sic] that drains into Red Mountain Creek. There was evidence that this erosion gulley [sic] has caused over 13 million pounds of tailings to be released into the creek. The several seepage zones on pile 2 have a water

flow of approximately one to three gallons per minute. Water runs off nearby Highway 550 onto the pile.

The third pile contains between 94,000 and 117,000 tons of mine tailings, is approximately fifty feet high and covers three acres. It too contains a large erosion gulley [sic] that runs 150 feet from the pile's western end into a decant tower. According to the State, pile 3 is the most stable. Sources of water run-on are a culvert that drains Highway 550 and runoff from the hillside above the pile.

Pile 4 is the largest tailings collection on the Red Mountain side. It abuts Red Mountain Creek, contains approximately 1.2 million tons of tailings and covers between 23.9 and 28.1 acres. Red Mountain Creek was moved and rechanneled to make room for this tailings pile. Although the pile's western slope is held away from the stream by timber cribbing, tailings spill over the cribbing into the creek. The pile also contains a decant line that discharges tailings drainage water directly into Red Mountain Creek. There are motorcycle tracks across the pile. This fourth pile was the last to be used by Idarado, with tailings last deposited there in 1955. Sources of water run-on to pile four include a nearby hillside, a county road and an Idarado road.

The fifth Red Mountain side pile, the buried tailings pile, contains approximately 150,000 tons of tailings and covers about five acres. The geologic conditions that created the lake and kept it filled with water have not changed. At the time of trial, an area of ponded water existed on the surface of the site. The pile is currently covered with approximately two to three feet of gravel material. A 24-inch highway culvert that discharges

water is located behind a maintenance shop adjacent to the buried pile. This culvert is higher in elevation than the pile, and, during spring snowmelt and summer, water has been observed flowing from the culvert downhill into the waste rock under the maintenance building.

The State contends that the stream on top of the buried tailings pile is caused by a subsurface water flow or stream. This opinion is based on observed water outflow but no visible inflow, and the acid quality of the water.

The heavy metals contained in these five piles are similar in composition to those contained in the Telluride piles, and include lead, cadmium, zinc, copper and silver. Approximately 97% of the tailings material is non-metallic "dirt." It is undisputed that the five piles are located on property owned and operated by the defendants.

As with the Telluride piles, when water contacts the tailings, hazardous substances are released into the water. This condition is exacerbated with the Red Mountain tailings because they are more oxidized and acidic than the Telluride tailings, causing the heavy metals to be more soluble and mobile. Ore mined from the Red Mountain side was more acidic than that mined from the Telluride side, and the ore was sometimes custom milled at Treasury Tunnel. The Red Mountain tailings have been exposed for approximately twenty years, causing them to be more oxidized. Very acidic water seeps from tailings pile 2 and the buried tailings pile. Tailings pile 2 releases high concentrations of zinc, lead, copper and cadmium, and is EP toxic for lead. Thus, the Red Mountain tailings

piles are major contributors of these metals to Red Mountain Creek.

The State used loading analysis procedures to ascertain metals concentrations in waters. A loading analysis looks at changes in water quality resulting from heavy metals discharges to a surface water environment, and attempts to determine the source of the metals discharge. Natural processes, such as sedimentation, resuspension and dilution of metals upstream, can alter metals loading. Identified sources of metals loading are called point sources. The major point sources to Red Mountain Creek include drainage from the National Bell tributary, the Genessee Mine discharge, the Treasury Tunnel weep line, and direct surface flows.

As a result of its own tests, Idarado attributed to itself approximately 3% of all metals loading to Red Mountain Creek. Excluding iron and aluminum, Idarado found its contribution to be 12%.

There is, however, significant non-point metals loading to Red Mountain Creek. Generally, a non-point load refers to an unaccounted for source. Non-point loading is calculated by the difference between water quality and flow in the stream and point source load. It would be virtually impossible to isolate the non-point source material in the Red Mountain Creek area. There is up to 50% non-point loading in the vicinity of the buried tailings pile.

Water quality in Red Mountain Creek is severely degraded by the release of hazardous substances, including zinc, cadmium, copper and lead. For example, upstream, Red Mountain Creek contains relatively low

concentrations of zinc, but major zinc increases occur downstream as a result of drainage from mining activity. Red Mountain Creek has a major impact on the Uncompaghre [sic] River, which has relatively good water quality for zinc. The Uncompaghre's [sic] zinc load near the Town of Ouray is about .5 mg/l, which is about five times higher than the upstream concentration, and higher than the Colorado standard of .2 mg/l established for this river segment. This zinc standard pertains to aquatic life rather than drinking water, which is a much higher standard.

According to the State's investigation, no fish were found in Red Mountain Creek or in the Uncompahgre River below its confluence with the Creek. If fish presently were stocked in Red Mountain Creek or in the Uncompaghre [sic] River along its course to the Town of Ridgway, they would die. A significant reduction in plant life density occurs immediately below the Idarado facility and continues for ten to thirteen miles downstream. No meaningful aquatic ecosystem exists on the Red Mountain side of the Idarado facility. The first sampling station that indicates a lower insect population was adjacent to Idarado's property. Macroinvertebrates and fish populations are reduced in these waters because of high metals loading and low alkalinity.

The Ridgway Reservoir is located approximately fifteen miles downstream from the Treasury Tunnel area near the Town of Ridgway, Colorado. The reservoir has some agricultural as well as recreational uses. Because of the contamination to the Uncompaghre [sic] River, the reservoir is severely impacted by a high concentration of iron precipitates and metals in the waters and sediments.

The State is not currently aware of any health risks in the Red Mountain district. However, the State did not collect any data regarding the area's air quality, soils or ground water.

The State has set forth the applicable, relevant and appropriate stream standards in its Record of Decision. These standards are based on aquatic life, not drinking water standards. The basic alkalinity levels applicable to the pertinent segment of the Uncompaghre [sic] River include .15 mg/l for zinc, .005 mg/l for copper and .004 mg/l for lead. The State's evidence indicates that the loadings for these metals are exceeded in the Uncompaghre [sic] River.

I find and conclude that the hazardous metals being released from the defendants' tailings piles into Red Mountain Creek are endangering the aquatic environment of that stream as well as the Uncompaghre [sic] River, and that remedial action is required. I further find and conclude that the defendants are liable for the cost of the cleanup remedy.

(i) The State's Proposed Plan.

The State's proposed remedy for the Red Mountain tailings piles consists of four components and is similar to the plan proposed for the Telluride piles. First, the plan calls for consolidating tailings piles one through three, and the buried pile, onto tailings pile four. Second, the consolidated pile would be covered with a three layer cap identical in design to the cap proposed for the Telluride piles. Material for the cap's layers is available from the Ironton Park area, and is adjacent to pile four. The State

contends that excavation of this material will assist in creation of passive treatment reservoirs for Red Mountain Creek water as discussed in Section V (F), *infra*.

Third, run-on and runoff diversion ditches would be constructed to channel surface water.

Fourth, construction would be designed to withstand the probable maximum flood event in order to protect the tailings impoundment from erosion and failure. All areas disturbed by construction would be recontoured and revegetated. The cost of the State's plan, including operation and maintenance, is estimated at approximately $9 million. .

(ii) Defendants' Proposed Plan.

Defendants' plan calls for stabilizing piles one through four in place through construction of run-on/runoff diversion and contour ditches. The piles' slopes would be protected from erosion by side slope terracing, modification, revegetation and the use of riprap. Tailings material that has eroded from pile two would be picked up and placed back on the pile and stabilized. Tailings migration to Red Mountain Creek from pile two would be remedied by building a rock dike between the pile and the stream.

All decant towers on the piles would be removed and the openings would be plugged with bentonite. An organic layer cover using manure, hay and chemical nutrients would be placed on each pile's surface.

The buried tailings pile also would be remediated in place by recontouring the surface above the pile to prevent water ponding. Drainage and diversion ditches would be constructed to prevent surface run-on.

Defendants assert that their remedial measures would be designed to withstand the 500-year flood event. They contend that, under their plan, natural infiltration from water precipitation through the piles would occur at an estimated level of ten to fourteen gallons per minute, compared to four to eight gallons per minute under the State's plan. Thus, they argue, the State's plan has no significant benefit in terms of effectively minimizing water seepage, infiltration or drainage through the piles. Maximum theoretical water erosion from the piles' surfaces under the defendants' plan would be approximately 1.3 inches in 100 years and 6.5 inches in 500 years, compared to a soil loss of 1.9 inches and 9.5 inches for the same time periods, under the State's plan. Defendants contend that wind erosion would be negligible, with a maximum theoretical amount of 0.1 inch in 100 years and 0.5 inch in 500 years.

Defendants have challenged various aspects of the State's plan as not reliable and contend that, in fact, they would have significant adverse environmental effects. For example, they argue that the State's tailings consolidation component would involve moving approximately one million tons of tailings over two and one-half miles with an elevation drop of approximately 800 feet. If the State's proposed conveyor system failed, tailings would be scattered through the air and deposited across the landscape. Moreover, the defendants estimate that construction costs for the State's plan would approximate

$10.9 million, a considerably higher figure than the State's cost estimate.

Defendants estimate that their proposed plan would cost approximately $930,000.

(iii) The Court's Remediation Plan.

I find and conclude that the State's plan is the more cost-effective and efficient remedy considering the harm to the aquatic environment posed by the release of tailings from the defendants' piles. I further conclude that this plan should be implemented regarding the tailings piles consolidation, but that the construction should be designed to withstand the 500-year flood event. As I determined with respect to the Telluride piles, I find and conclude that the proposed six foot multilayer cap is excessive and unnecessary. The State is directed to prepare and submit to the Court within ninety days of this Order a plan that addresses the feasibility of a capping design along the lines of the plan for the Telluride piles, and other pertinent design revisions based on my conclusions. This alternative plan also shall include a revised, and hopefully lower, cost estimate.

(F) Mine Portals and Waste Rock Piles.

This trial phase involved the discharge of contaminated water from the defendants' mine portals and across certain waste rock piles. The State's concern is the effect of this allegedly contaminated water on the San Miguel River on the Telluride side, and on Red Mountain Creek and the Uncompahgre River on the Ouray side.

There are over one hundred miles of mine workings within the Idarado mine. Water, caused by precipitation, snow melt and rainfall, enters the mine through collapse features called "glory holes," vein systems and natural joint systems within the rock. A "glory hole" results when the mine collapses into itself. It is caused by mining too close to the earth's surface without providing adequate underground support where there is not sufficient rock near the surface to provide a solid crust. A "vein" is a nearly vertical planar feature that results when the metals are mined out.

Mine waste rock consists of mineralized or non-mineralized excavated rock that was not processed either because the rock contained uneconomical metals or the metals were too difficult to extract. Waste rock is the natural rock material that results from the excavation of mine tunnels and shafts used to gain access to the ore. This rock material was discarded in dumps located at the portals, (or mine tunnel openings), or near shaft collars. Waste rock also was dumped in streams, or across stream beds.

The mine tunnels also contain mine mud, or muck, which is sediment left over from the mining operations. Mine water becomes contaminated with heavy metals through it's contact with mineralized areas in the mine. During peak water flows, metals in the mine muck are remobilized. Water quality within the mine varies, but throughout the mine, the water contains elevated concentrations of zinc, lead, copper and cadmium. Mine muck samples from certain sites within the mine contained as much as 15,000 parts per million ("ppm") of lead, and failed the EP toxicity test. Contaminated water drains out

of the mine through the portals and flows across waste rock piles where it encounters heavy metals and picks up further contamination.

Sixteen mine portals located on the defendants' property discharge water. Thirteen of these tunnels are situated within the Telluride Valley drainage basin that includes the San Miguel River, and its tributary, Marshall Creek. Of these thirteen portals, eleven discharge relatively small amounts of water, totalling approximately five to ten gallons per minute ("gpm"). These eleven portals are located in the High Country, and include the Stillwell Tunnel, three unnamed portals and the Ophir Tunnel in Marshall Basin; the Columbia, Tomboy, Lower Japan, Bullion and Penn Tunnels in Savage Basin; and the Black Bear Tunnel in Ingram Basin. Marshall and Savage Basins merge and water drainage from these two basins flows to Marshall Creek which eventually empties into the San Miguel River. Most of the waste rock piles are located at the base of Marshall Creek. The Mill Level and Meldrum Tunnels drain the bulk of the Idarado mine on the Telluride side.

The Mill Level portal is located 2,900 feet below the earth's surface, and is the lowest of Idarado's sixteen tunnels. Its peak water flow averages 13,000 gpm and its base flow averages 2,000 gpm. The Mill Level portal water discharges into a series of infiltration lagoons that were constructed by the defendants, and then it infiltrates into the ground. The portal's water discharges an average of 91,000 pounds of zinc per year. It is a major source of metals loading to the San Miguel River.

The Meldrum Tunnel, situated 2,000 feet below the surface, has a peak water flow of 8,000 gpm and a base flow of 300 gpm. Water from the Meldrum Tunnel flows through an 800 to 1,000 foot "weep line" (a perforated pipe), seeps into the ground, and ultimately reaches Ingram Creek, a San Miguel River tributary. Approximately 60,000 pounds of zinc are discharged into the San Miguel River annually from the Meldrum Tunnel.

The Black Bear mine area is the worst mine water source. Its water contains zinc concentrations of 460 mg/l, as well as elevated lead levels. It has a ph [sic] of.2.9.

The three remaining Idarado portals are located in the Red Mountain Valley drainage basin. The Lower Barstow Tunnel, in Commodore Gulch, and the Imogene Tunnel in Spirit Gulch, are located in the High Country. The Treasury Tunnel discharges water in the Red Mountain millyard area. The Red Mountain Valley drainage basin contains the Uncompahgre River and its tributary, Red Mountain Creek.

The Treasury Tunnel is 1,200 feet below the earth's surface. It has a base water flow of 5 gpm and a peak flow of approximately 135 gpm. The water is discharged through a weep line that overlies waste rock. Treasury Tunnel water annually contributes approximately 1,500 pounds of zinc to Red Mountain Creek, and also contains elevated levels of copper, lead and cadmium.

Red Mountain Creek is very acidic and contains high concentrations of metals. The high metals concentrations persist throughout the creek and into the Uncompahgre River. The metals concentrations and acidity decrease progressively downstream in the Uncompahgre River to

the Town of Ridgway, Colorado. This decrease in metals concentrations is the result of the natural combined effect of dilution and the increased pH which promotes metals precipitation.

In 1976, Idarado was issued a water discharge permit by the Colorado Department of Health pursuant to a delegation of authority from the federal government under the Federal Water Pollution Control Act (33 U.S.C. § 1342). The permit applied to discharges from the Mill Level, Meldrum and Treasury Tunnels. The evidence indicated that no permitted releases to surface waters were authorized.

Generally, the mine portals that are discharging water, and the waste rock piles located in the High Country, pre-date Idarado's mining activity.

I have previously discussed my conclusions regarding the detrimental impact on the San Miguel River from the defendants' mining activities. Although the San Miguel River presently meets drinking water standards, water quality fails to meet the standards set forth in the State's Record of Decision. Existing water quality in Red Mountain Creek also regularly fails to meet current water quality standards. Metals levels in the Uncompahgre River exceed standards during certain times of the year. I therefore find and conclude that the discharge of contaminated waters from the defendants' mine portals, and through waste rock piles, is adversely affecting the stream systems on both the Telluride and Red Mountain sides of the mine to the detriment of the aquatic environment. I hold that the defendants are liable for the costs of cleaning up these areas.

(i) The State's Proposed Remedy.

The State's clean up plan consists of two components: (1) diverting water away from contamination sources; and (2) treatment of contaminated water.

Water Diversion Component

To prevent water from contacting contamination sources, the State plan would (a) divert water around waste rock piles; (b) divert water around collapse features, where feasible; (c) plug, or close the majority of the High Country portals; and (d) divert water away from mineralized areas within the mine.

The parties have agreed on several points regarding the water diversion phase. Defendants have agreed in concept to divert water around the High Country waste rock piles, located on Idarado property, through which surface water currently flows. Idarado also has agreed to divert surface water around a discrete mine inflow point in the Flat Vein area. In addition, the State proposes removal of some waste rock piles, but the defendants have not agreed to remove any piles.

On the Red Mountain side, the State's plan includes diverting water around waste rock piles near the defendants' Barstow and Treasury Tunnels. The State's water diversion plan, however, also includes the Genesee [sic], Justin and Joker mining areas, which are not owned by the defendants. Defendants do not agree to divert water in areas that they do not own.

Where feasible under geologic and hydrologic conditions, Idarado has agreed to plug the High Country portals located on Idarado property, subject to the State's approval of drawings, final plans and specifications. The portals that will be plugged are the Ophir, Tomboy, Imogene, Columbia, Lower Japan, Bullion and Penn Tunnels, and the three unnamed tunnels in Marshall Basin. The State has not otherwise designated the portals that it plans to close. On the Telluride side, it is not feasible to close the Mill Level and Meldrum Tunnels because water pressure inside the tunnels is too high. Defendants do not plan to close the Stillwell Tunnel because it is a drinking water source for the Town of Telluride.

To further reduce contamination, the State proposes to divert mine water around or away from chutes, ore passes, broken vein rock and other highly mineralized mine areas. Certain highly fractured, mineralized veins will be sealed. Although the defendants have not stipulated to these remedies, they do not appear to dispute their propriety.

Treatment of Contaminated Waters

The water treatment phase of the State's plan is hotly contested by the parties. Generally, the State proposes to divert and separate waters within the mine and then decontaminate them, utilizing various treatment systems.

All waters within the Idarado mine above 1,200 feet would be diverted by gravity to the Treasury Tunnel portal on the Red Mountain side. This water is of extremely poor quality and includes the highly contaminated water from the Black Bear mine area. This in-mine

diversion will reduce the flow from the Meldrum and Mill Level Tunnels on the Telluride side. Clean mine water (*i.e.*, water that meets the standards established in the State's Record of Decision) will be separated from the contaminated waters within the mine, routed out the Meldrum Tunnel, and discharged directly into the San Miguel River. Water located below 1,200 feet will be discharged from the Mill Level Tunnel for treatment.

On the Red Mountain side, the contaminated water discharged from the Treasury Tunnel will flow into Red Mountain Creek, become neutralized and then be treated in a passive reservoir system. The State contends that diverting the contaminated water to Red Mountain Creek will enhance that stream's pH adjustment because the diverted water is more alkaline than the Creek's water. Red Mountain Creek will be charged with lime or limestone to raise the pH from 3.5 (extremely acidic) to 6.5 or 7 (neutral). A ball mill will be used to break the limestone into fines, the fines will be mixed with creek water and an agitator, and the mixture will be piped *via* gravity flow to the stream and added to a very steep section of Red Mountain Creek to obtain a thorough mixing.

According to the State's experts, acid neutralization will cause iron and aluminum to precipitate out of the Creek's waters. The toxic metals, including zinc, cadmium, copper and lead then will "sorb" to the iron and aluminum precipitates and thus be removed from the waters. "Sorption" is the physical-chemical process that involves a negative-positive reaction causing metals to attach to one another.

The treatment reservoir will be constructed a few miles downstream at Ironton Park. The reservoir will be designed to hold water from Red Mountain Creek for a sufficient period of time (approximately twenty days) for the iron and aluminum precipitates to settle out. The toxic metals will remain trapped in the reservoir and the decontaminated water then will be released back into Red Mountain Creek. No other facility in the United States is currently using this "lime or limestone charging" method successfully to treat acid mine drainage. However, crushed limestone has been used in coal mining systems in the eastern United States.

The State does not plan to pick up any miscellaneous tailings from Red Mountain Creek because they would settle out and be treated in the Ironton Park reservoir.

The State contends that this phase of its plan would clean up twenty miles of stream, protect downstream areas from future degredation, and remove 90% of the metals from the Uncompahgre River. One purpose of the State's plan is to restore and protect aquatic life in Red Mountain Creek, and to enhance all present and future uses of the Uncompahgre River, including irrigation, drinking water and recreational uses.

On the Telluride side, contaminated water will be discharged from two primary sources, Mill Level Tunnel and Marshall Creek surface water. The State proposes treating the Mill Level water in a geochemical adsorption field to be constructed in the Royer Gulch glacial debris fan approximately 100 feet above the valley floor. The State's adsorption field will utilize the same principles as the defendants' existing infiltration lagoons but allegedly

would be more effective because it would impose a longer travel path and employ fine glacial till particles, which are more effective adsorptive materials, thereby increasing adsorption capacity. Defendants' lagoons presently achieve adsorption through active organic materials.

The proposed field's effectiveness would be monitored for five years. As discussed in Section V (A), *supra*, regarding the Telluride tailings piles, construction in the Royer Gulch area would require relocation of the Pandora Trailer Park.

To treat the Marshall Creek drainage, the State proposes constructing a multifunction treatment pond in the area of Telluride tailings pile number one, or below the Pandora Mill area. This pond would allow for a three-fourths day water holding time and would have a capacity of approximately 56,000 cubic yards. The State contends that the Marshall Creek pond is necessary to reduce metals loading to the San Miguel River from bed load sediments and suspended metal solids generated in Marshall Creek during storm events and peak water flows. The pond would trap these suspended and bed load particulates. It also would be used for infiltration treatment, and treatment by sorption of heavy metal materials to the pond's bottom sediments. At the time of trial the State had not yet completed the final design work regarding the depth, steepness, or flow path of the proposed Marshall Creek pond.

The State estimates the cost of its water diversion and treatment plan for the entire Telluride-Red Mountain area at approximately $18 million.

(ii) Defendants' Proposed Plan.

Beyond the remedial steps agreed to by the parties, the defendants generally propose plugging all portal discharges located on Idarado property on the Red Mountain side. This includes the Treasury Tunnel and the Barstow portal. Mine waters from the Red Mountain side thus would be diverted to the Telluride side.

On the Telluride side, the defendants plan to plug the Black Bear portal, and to expand and upgrade the existing infiltration systems for the Mill Level and Meldrum Tunnel discharges.

Defendants' plan also calls for extensive mine water diversions to prevent contact between mineralized materials and mine water.

Defendants strenuously oppose imposing on them the liability or expense of plugging mine portals, or diverting water around waste rock piles, that are not located on Idarado property. Defendants agree that, on the Red Mountain side, the Lower Barstow, Imogene and Treasury Tunnel portals, and the waste rock piles situated at these locations, are sources of heavy metals loading to Red Mountain Creek. Once these sources are closed, the defendants assert, any water pollution for which they fairly may be held liable will have been controlled.

Several portals on the Red Mountain side, not owned by the defendants, discharge water into Red Mountain Creek. These portals include the Larsen Brothers Mine, the Joker Tunnel, the Genesee [sic], the Guston, the

American Girl, the National Belle and the Hero. The evidence established, however, that Idarado owns mining claims located within several of these mining areas.

As the defendants have pointed out, water diversion to Treasury Tunnel under the State's plan will increase substantially the metals loading to Red Mountain Creek, perhaps doubling the zinc concentration. The State's proposed "charging" method is directed at future, on-going metals releases, not past metals loading. After the Idarado portals are closed on the Red Mountain side, the defendants argue that they should not be held responsible for any alleged contamination to Red Mountain Creek. The State disagrees, contending that Idarado's contribution will not be eliminated because there is a significant amount of non-point loading that cannot be traced to a particular source or otherwise accounted for. Thus, according to the State, portal plugging will not address or remedy Idarado's non-point contributions to the stream problems.

Defendants also challenge the State's proposed treatment reservoir on the Red Mountain side, contending that it will fill with sludge in just over a year if lime is used. Defendants estimate that sludge build-up will occur within six years even if limestone is used as a charging agent.

On the Telluride side, the defendants oppose the State's adsorption field for the Mill Level discharge, emphasizing that it will serve the same purpose as the present infiltration lagoons. According to the defendants, there are no reliable data indicating that a longer flow path and the Royer Gulch soil material will provide more

effective adsorption. Moreover, the defendant's [sic] argue that under the State's plan, the water discharge would be closer to the Town of Telluride and existing fish population. Defendants further contend that construction in the Royer Gulch area would have an adverse social impact because some Town residents would have to be relocated.

Defendants propose retaining the existing infiltration lagoons for the Mill Level discharge, but would increase the lagoons' capacity by 25%. Sediments from the lagoons would be removed and placed on Telluride tailings piles 5/6.

Defendants also would retain the existing weep line for the Meldrum Tunnel discharge. To reduce maintenance, the weep line would be replaced with better quality, high density polyethylene pipe, retrenched, and covered with coarse rock.

Defendants oppose the proposed construction of the Marshall Creek settling pond, contending that it is unnecessary. Defendants do not propose any action to reduce metals loading to Marshall Creek except by diverting water around waste rock piles.

With respect to mine waters, the defendants plan to reduce metals loading by controlling, rerouting, or diverting mine waters, and by cleaning out the mine muck in accessible mine areas. Defendants' plan calls for mucking out the mine only once. Only 10% of the mine is accessible for mucking.

Defendants estimate that their proposed remedies for plugging portals and diverting water around waste rock piles will result in at least a 67% reduction of the zinc

loading to Marshall Creek. They assert that their proposed internal mine work will result in at least a 21% reduction in the zinc load being discharged from the Mill Level Tunnel, and at least a 53% reduction in the zinc load being discharged from the Meldrum Tunnel. It is not the goal of the defendants' plan to meet Colorado stream standards. Defendants estimate the total cost of their proposal at approximately $1.1 million.

(iii) The Court's Remediation Plan.

Selecting the proper remedy here has been an extremely difficult task. Unfortunately, the State's proposed plan is incomplete in several respects. Moreover, all aspects of the State's plan have not been tested, and the plan would be expensive.

However, the State's evidence regarding the harm to the area's streams and aquatic life caused by the release of hazardous substances as a result of the defendants' mining activities is overwhelming. I am not persuaded that plugging the defendants' mine portals situated on Idarado property will either stop the harm or end the defendants' liability. There was substantial evidence that the defendants own mining claims within several of the non-owned portals areas, and that there is significant non-point source metals loading to Red Mountain Creek.

Initially, the parties are ordered to file, within thirty days, a written stipulation outlining the remedial activities that they have agreed upon with respect to portal plugging and water diversion activities. I decline to order the defendants to plug mine portals or to divert water

around waste rock that is not located on property either owned by Idarado or over which it holds mining claims or some possessory property interest.

In all other respects, I find and conclude that the evidence supports implementation of the State's water diversion plan which includes diverting water out the Treasury Tunnel on the Red Mountain side, and out the Mill Level and Meldrum Tunnels on the Telluride side.

I further find and conclude that there is sufficient evidence to support implementation of the State's water treatment plan. This includes neutralizing the Red Mountain Creek waters and construction of the Ironton Park reservoir on the Red Mountain side, as well as construction of the geochemical adsorption field and the Marshall Creek pond on the Telluride side.

Within ninety days, the State shall file a specifically detailed outline of its proposed plan stating: (a) the size, location, and design of the Marshall Creek settling pond; (b) the mine portals that will be closed; (c) the mine inflow points, or collapse features, and the waste rock piles, that will be remediated; (d) the size, location, and design of the Royer Gulch infiltration lagoons; (e) the methodology for charging Red Mountain Creek; and (f) the size, configuration, and location of the Ironton Park reservoir. A revised cost estimate also shall be included.

(G) Millsite Cleanup.

There are two millsites located on Idarado's property. The Pandora Mill on the Telluride side is located in the area of tailings piles 5/6 and the existing infiltration

lagoons. The Red Mountain millsite, which includes the Red Mountain warehouses and offices, is bounded by the highway on the west and Red Mountain Creek on the east.

In 1985, polychlorinated biphenyl ("PCB's") transformers and PCB contaminated soils were found at three above-ground areas at the Pandora Millsite. Eight waste source areas subsequently were designated at the Millsite.

Area One was an area of dead aspen trees that contained oil-stained tailings overlain by metallic oily sludge. The soils contained 575,000 ppm zinc and traces of 1.1.1 trichlorethane ("TCA"), and other organics. Defendants' evidence indicated that they have excavated the oily sludge, placed the excavated material in drums, and transported the drums to an offsite licensed waste disposal facility.

Area Two was a transformer storage area that contained eleven transformers. Seven of the transformers were sealed and four were broken and empty. All transformers were sampled and two contained PCB's. The soil indicated PCB contamination of 2,000 ppm. Defendants have excavated the soil in Area Two to a depth of ten inches, and have placed the soil in drums for shipment to an offsite storage facility.

Area Three contains approximately 200 leaking, rusted out and/or bulging barrels. Some of the barrels contained waste oil contaminated by acetone and TCA. Others contained wood chips that failed the EP toxicity test for lead, and were contaminated by the organic mill reagent, xanthate. Soils were contaminated by TCA and

were strewn with wood chips. The barrels, wood chips and excavated soil have been shipped to an offsite disposal facility. The soil has been retested for TCA with negative results.

Areas Four and Five contained empty barrels and trash, but the soil was not oil-stained. No samples were taken and there was no evidence that hazardous substances were being released into the environment from this area.

Area Five-A, the boiler tank area, contained transformers and PCB contaminated soil. Defendants have excavated the soils in this area to a depth of ten inches and have placed the soil in drums for shipment to an offsite facility.

Area Six contained storage drums of unused motor oil. The area was oil-stained but no samples were taken because electrical equipment and solvents had not been stored there.

Area Seven, another barrel storage area, contained fire-assay slag, cupels (bone-ash cups used to draw lead away from precious metals such as gold and silver in assaying), and barrels of chemicals and liquids, including xanthates. The fire-assay slag, cupels, xanthates and barrels have been shipped to a licensed offsite facility. Defendants have not sampled the soil in this area.

Area Eight, located off the millsite below tailings piles one through four, contained two empty transformers. The transformers have been shipped to an offsite facility but the soil has not been sampled.

Oil-contaminated soils also were observed near a waste rock pile and the pumphouse at the Pandora Millsite. The soils in these areas have not been tested.

The Red Mountain millsite contained one area of above-ground PCB contaminated soil and some transformers. The soil in the area tested below 50 ppm for PCB's. Defendants have excavated the soil to a depth of ten inches and have placed the soil in drums for offsite disposal. The soil has not been tested for TCA. Defendants also have disposed of rusted out drums and trash found near Red Mountain Creek.

PCB's are not naturally occurring substances, are very toxic, and are possible human carcinogens. These harmful agents are readily absorbed by inhalation, ingestion and through the skin.

Defendants also disposed of tailings material at both millsite areas. The tailings are a possible lead source that is toxic to animals from consumption of metal-laden plants.

I find and conclude that the defendants have used both millsite areas as hazardous waste disposal sites and that releases of hazardous substances from these areas are posing a threat to the public health and to the environment. I conclude that the defendants are liable for the cleanup of these sites.

(i) The State's Proposed Plan.

With respect to both millsites, the State proposes that PCB's and other hazardous organics be removed from the

millsite areas to a licensed waste disposal facility. Complete removal should be confirmed by appropriate testing. The State indicates that the USEPA in Region VIII (which includes Colorado) requires cleanup of PCB's spilled before May 5, 1987 to background concentrations of zero to one or two ppm unless that cleanup standard is not practically attainable.

The State further proposes that all tailings material and soils with lead concentrations in excess of 1,000 ppm be removed from the millsite areas. Under the State's plan the Pandora Millsite tailings would be removed to tailings piles 5/6 on the Telluride side, and the tailings at the Red Mountain mill would be removed to pile 4. The millsite areas that are disturbed by mining or remedial activity would be revegetated.

The State estimates that the cost of its proposed cleanup activities would be $644,000. Subsequent monitoring activities that the State seeks to impose would cost approximately $880,000.

(ii) Defendants' Proposed Plan.

The evidence establishes that the defendants already have undertaken certain cleanup activities at both millsites. In implementing these cleanup measures, the defendants emphasize that the USEPA adopted a new cleanup policy with respect to PCB's on April 2, 1987. That policy requires soils cleanup to a level not exceeding twenty-five ppm in restricted access areas and not exceeding ten ppm (covered by a cap of ten inches of clean soil) in residential/commercial areas.

Defendants agree to remediate the soils in Areas Two and Five-A at the Pandora Millsite, and at the Red Mountain mill area in accordance with the new USEPA standard for residential/commercial areas. These areas also will be revegetated.

Defendants oppose the State's plan to conduct systematic soil samplings for PCB's and other organics at both mill sites. Instead, the defendants propose conducting representative soil sampling for PCB's in Areas Seven and Eight, and for TCA in Area Seven at the Pandora Millsite.

Defendants' plan would revegetate the millsite tailings in place, if feasible. Otherwise, the tailings would be covered, or moved, and the ground then revegetated.

Defendants contend that lead, if any, contained in millsite soils does not threaten public health or the environment. Moreover, the State has not sampled the soils at either millsite to determine lead levels. Thus, the defendants have not submitted a remediation plan regarding lead in soils.

Defendants propose revegetating only disturbed areas that are currently vegetated.

Through July 1987, the defendants had already spent $587,000 on millsite cleanup activities.

Since trial, the defendants have filed a motion to reopen the evidence on the millsite cleanup phase of this case. Defendants advised the court during trial that they had been sued by the USEPA under the TSCA regarding PCB spills and PCB-containing equipment at the site.

Defendants now seek to introduce evidence that, on September 16, 1987, they reached an agreement with the USEPA which provides for cleanup of all leaks, spills or other releases regarding soil contamination of PCB's at the millsites to a level of ten ppm.

In view of these developments since the trial, the court has concluded that an additional hearing should be held to allow the parties to submit evidence and arguments regarding the Millsite cleanup in light of post trial work done there.

The parties shall jointly apply, within 11 days of this order, for a hearing date to be set on an expedited basis and shall meet in advance of that date to stipulate all facts as to which there is no good faith dispute and agree upon admission of exhibits.

VI. Miscellaneous Matters.

(A) Relocation of the Pandora Trailer Park.

One of the most difficult issues arising from the State's proposed plan regarding the Telluride tailings piles and the treatment of the Mill Level Tunnel discharge is the State's proposal to relocate approximately seventy or eighty residents and eighteen to twenty-four trailers at the Pandora Trailer Park in Royer Gulch. The trailer park, which provides low-income housing for the Town of Telluride, is situated on land owned by Idarado near tailings piles one through four.

The State contends that the Royer Gulch debris fan is a natural, readily available, low cost source of cap material for the Telluride tailings piles, and that use of material from that area will render unnecessary the trucking of cap material through the Town of Telluride. The State also proposes to construct the geochemical adsorption field in the Royer Gulch debris fan.

(i) The State's Proposed Plan.

The State's plan does not require moving all the Pandora Trailer Park trailers (there presently are thirty-three trailers in the area), nor would any houses be moved. The State proposes that the trailers be moved to another area on the defendants' property only a few hundred yards from the trailer park's current location. The State originally estimated costs for this phase by assuming relocation of all thirty-five units at a cost of $20,000 per unit, plus the primary expenses of sewer and water line installation and site work. The State has already revised its cost estimate once and it is obvious a new, more detailed estimate is needed. This will be dealt with in discussing the court's plan, below.

(ii) Defendants' Proposed Plan.

Defendants' plan regarding the Telluride tailings piles and the Mill Level Tunnel discharge would not require relocating any of the Pandora Trailer Park residents. However, Idarado currently supplies utilities services (power, water and sewage) to several individual homes and trailers, and certain aspects of the defendants'

plan would result in water and sewage services being discontinued.

As an alternative, the defendants suggest that the Idarado treatment plant could be connected into the Telluride city sewer system at a construction cost of between $60,000 and $70,000, with an additional cost of $3,500 per unit for hookup to the sewer line. The total cost of this sewer service modification would be $260,000.

As to water, the defendants suggest that Idarado continue water service to trailer park residents for the time being, and eventually attempt to tie into the Telluride city water line. However, they have not determined whether the trailer park's water and sewer pipes meet Telluride's standards.

(iii) The Court's Remediation Plan.

I find and conclude that the State's evidence justifies relocating certain trailers in the Pandora Trailer Park. Defendants are incorrect in their argument that the trailer park residents cannot be relocated pursuant to CERCLA § 101(24), [42 U.S.C. § 9601(24)] absent a Presidential order. Section 101(24)'s reference to 'relocation' concerns the relocation of residents, businesses and community facilities to protect them from exposure to hazardous substances that cannot be cost-effectively controlled. The State is not attempting to relocate persons to a new area to isolate them from exposure to toxic waste. The State's relocation plan is part and parcel of its proposed remedial action aimed at the Idarado facility as a whole. Under

these circumstances, I hold that a Presidential order is not required.

Defendants also contend that they cannot be compelled to relocate the trailer park because they own the land, the trailer owners are month-to-month tenants, and Idarado can terminate their leases on thirty days notice. Since I have determined that these residents must be relocated so that the State can effectively implement its cleanup remedy, the defendants are precluded from taking any other or contrary action regarding this property without a prior order from this court.

The State's relocation proposal is incomplete in several respects. Within ninety days of this order, the State shall file with the court a more complete relocation plan that specifically identifies the trailers to be moved and the relocation site for each. The plan also shall contain a revised cost estimate. The State shall seek the input and cooperation of the defendants in finalizing this relocation plan and cost estimate.

(B) Revegetation of Disturbed Areas.

Generally, the State's overall remedial plan calls for establishing permanent, effective, self-sustaining vegetation on tailings piles caps, tailings removal areas, construction staging areas, areas where water is to be diverted away from mine waste, borrow areas for cover material, construction corridors, the Pandora and Red Mountain millsites, and other areas disturbed by remedial activities. The State asserts that revegetation is necessary to assure permanent stability and to minimize surface water and wind erosion. Plant species that are

generally drought resistant and adaptable to the characteristics of the areas to be revegetated will be selected for this purpose.

Defendants have agreed to revegetate tailings piles, and those areas disturbed during remediation if the areas were previously vegetated. They oppose as premature the implementation of a specific revegetation plan that applies to areas that were not vegetated before remediation. For example, the defendants object to revegetating the millyard areas because there has been no vegetation there for some time.

The State's position is based on the Colorado Mined Land Reclamation Act ("the Act") which requires that every operator of a mining operation reclaim affected lands. C.R.S. § 34-32-116. That Act defines "reclamation" as

> "[t]he employment during and after a mining operation of procedures reasonably designed to minimize as much as practicable the disruption from the mining operation and to provide for the rehabilitation of affected land through the rehabilitation of plant cover, soil stability, water resources, or other measures appropriate to the subsequent beneficial use of such mined and reclaimed land." § 34-32-103(13).

The term "affected land" includes all areas disturbed by mining activities and associated work areas. § 34-32-103(1).

I find and conclude that the Colorado Mined Land Reclamation Act contemplates the restoration of all land that has been disturbed by mining processes, not just

those areas disturbed by restoration or remedial activities. This includes those areas, such as the millyard areas, that have not been covered with vegetation for some time as a result of past mining activities. I therefore reject the defendants' argument on this issue and conclude that revegetation shall be co-extensive with the requirements of the quoted Colorado statute.

(C) Habitat Enhancement and Fish Stocking.

I briefly addressed the issues of habitat enhancement and fish stocking in adopting the State's remediation plan for the miscellaneous stream bank tailings. Defendants complain that the State has not specified the exact areas selected for remediation in the form of habitat enhancement except for citing the Society Turn area of the San Miguel River, and an unspecified portion of the river below Bear Creek and Society Turn. Generally, the State plans to implement habitat improvement activities in the San Miguel River after reclamation activities are completed. The proposed habitat enhancement activities include placing random rock and gabions in the stream to create riffles and pools, construction of diversion structures and dams, reconstruction of riparian vegetation, and planting trees along the stream banks.

The State also proposes to stock brook, rainbow, and brown trout in the San Miguel River, to create self-sustaining populations of these species and to provide for recreational uses of the river.

Defendants oppose these activities. They argue that rainbow and brown trout are not native to the San Miguel River area. A natural population of brook trout allegedly

exists in the San Miguel below Bear Creek. Defendants contend that there is no causal connection between the release of hazardous substances from its mining operations and the absence from the San Miguel of these two particular fish species.

Defendants further contend that current habitat deficiencies are the result of other causes not associated with Idarado, such as stream rechannelization, construction activities in the Town of Telluride, and stream bank erosion caused by human and farm animal trampling of bank areas. Moreover, they argue that some of the affected areas are privately owned and the State has not acquired necessary rights to this private land.

In response, the State contends that there will be certain times of the year when stream cleanup standards cannot be achieved and during those times the fish in the San Miguel will be exposed briefly to heavy metals. The fish will be better able to tolerate this metals exposure if they are not simultaneously being exposed to other stresses such as lack of habitat or food. Fish stocking will encourage a diverse and healthy aquatic ecosystem, further enhancing the environment. The cost of the State's habitat enhancement and fish stocking plan is estimated at $188,000.

I find and conclude that habitat improvement and fish stocking in the San Miguel River are actions that are necessary to mitigate damage to the environment caused by the defendants' mining activities. Throughout these proceedings the defendants have argued that they cannot be required to restore the sites involved to their exact pristine condition. While that is true, it is equally true

that they can, and should be required to restore previously available uses of the land without restriction to the exact same species of plants, animals or fish. These steps are consistent with the overall permanent remedy and are appropriate CERCLA response actions. I agree with the State that mitigation, as a response action, does not require replication of the exact conditions that existed before the land and water were despoiled.

(D) Performance Monitoring and Compliance Verification.

The State has set forth in the ROD a performance plan and compliance framework, including monitoring activities, for surface water, ground water, aquatic life, air quality, soils, revegetation, and construction activities with respect to the overall remedy it seeks to impose. I find and and [sic] conclude that, generally, this scheme, as outlined in the ROD, is the most cost-effective and efficient method of implementing the remedies approved in this Order. However, this implementation plan must be modified to conform to the findings and conclusions set forth in this opinion. Therefore the State is directed to file with the court, within ninety days, a modified performance plan and compliance framework outline, including a revised cost estimate, not inconsistent with this Order.

(E) The Town of Telluride's Renewed Motion to Intervene.

The Town of Telluride contends that it has incurred costs in excess of $1,236,000 in response to pollution of air, soils, and water in and around the Town caused by

the defendants' mining operations. These costs were allegedly incurred by the Town for construction of a surface water treatment facility. The facility allegedly became necessary when construction of the Town Park well system had to be halted because of heavy metals contamination of the San Miguel River aquifer.

During trial, I excluded evidence relating to costs allegedly incurred by the Town because the State lacked standing to represent that entity. The Town has renewed its motion to intervene. The State also has asked that I reconsider my ruling, or in the alternative, permit the Town to intervene. Defendants have responded by opposing all motions.

At trial, I noted that the Town is a person under CERCLA and that it could sue in its own behalf. Moreover, it does not appear that the Town has satisfied CERCLA's procedures with respect to its attempts to recover costs incurred in building the water treatment plant.

I again deny the Town's motion, without prejudice to its right to file its own lawsuit against the defendants. The State's motion for reconsideration or, in the alternative, to permit the Town of Telluride to intervene, is denied.

VII. CONCLUSION.

I find and conclude that, overall, the State of Colorado's CERCLA response efforts with respect to the Idarado Facility are "not inconsistent with the NCP," and that the applicable or relevant and appropriate federal

and state environmental and public health requirements have been identified and applied as set forth in the State's Record of Decision.

I further find and conclude that, except as modified by this Order, the State's response efforts, as set forth in the Record of Decision, are "cost-effective," in having selected the appropriate extent of remedy that effectively protects and minimizes threats to public health, welfare and the environment.

I conclude that, except as modified by this Order, the State's overall remedial action plan for the Idarado Facility as set forth in the Record of Decision is not arbitrary or capricious. Moreover, I conclude that it accords with the law. To this extent, the Record of Decision, as prepared by the State of Colorado, is incorporated by reference into and made part of this Order.

I find and conclude that the defendants are strictly liable, and jointly and severally liable, to the State of Colorado for all costs of remedial actions incurred, and to be incurred, in responding to the release or threatened release of hazardous substances at and from the Idarado Facility, since March 31, 1987, as set forth in this Order. More specifically, I conclude the following:

(A) With respect to the Telluride tailings piles, cleanup liability shall be imposed against the defendants in accordance with the court's findings and conclusions, and declaratory judgment shall be entered in favor of the State on this issue; the State is ORDERED to submit within thirty days a revised cost estimate regarding the implementation of the cleanup plan as selected by the Court.

(B) Liability shall be imposed against the defendants regarding the cleanup of the Society Turn tailings in accordance with the court's findings and conclusions, and declaratory judgment shall be entered in favor of the State on this issue; the State is ORDERED to select the tailings removal site within six months.

(C) With respect to the miscellaneous tailings, cleanup liability shall be imposed against the defendants in accordance with the court's findings and conclusions, and declaratory judgment is entered in favor of the State; the State is ORDERED to submit a more specific cleanup plan within ninety days, including a revised cost estimate.

(D) Defendants are not liable for clean up of the Town of Telluride soils, and the State's request for declaratory judgment on this issue is denied; the defendants shall, however, implement, and bear the cost of, their proposed five year monitoring plan of Telluride area residents in accordance with the court's findings and conclusions.

(E) Cleanup liability shall be imposed against the defendants with respect to the Red Mountain tailings in accordance with the court's findings and conclusions, and declaratory judgment shall be entered in the State's favor on this issue; the State is ORDERED to submit a revised plan and cost estimate within ninety days.

(F) With respect to the mine portals and waste rock piles, the defendants are liable for the cleanup of these areas in accordance with the court's findings and conclusions, and declaratory judgment is entered in the State's favor on this issue; the parties shall prepare and file

within thirty days a written stipulation regarding all remedial action concerning this issue that has been agreed upon; the State is ORDERED to submit within ninety days a more specific cleanup plan and revised cost estimate, as indicated in this Order.

(G) The parties jointly shall apply, in writing, within eleven days, for an expedited hearing date regarding the issue of the millsite cleanup; the parties are further ORDERED to meet in advance of that date to stipulate all facts as to which there is no good faith dispute and agree upon admission of exhibits.

(H) The Pandora Trailer Park shall be relocated in accordance with the court's findings and conclusions; the defendants are enjoined from taking any action regarding this property contrary to the court's findings and conclusions without an order from this court; and the State is ORDERED to file a more complete relocation plan and revised cost estimate regarding the trailer park's relocation within ninety days.

(I) Defendants shall be liable for revegetation of disturbed areas, habitat enhancement and fish stocking as set forth in the court's findings and conclusions; declaratory judgment shall be entered in favor of the State on these issues.

(J) The State shall file within ninety days a modified performance monitoring and compliance verification plan in accordance with the court's findings and conclusions.

Defendants are ordered and mandatorily enjoined to conduct the remedial activities as described in the State's Record of Decision, to the extent they are in accordance

with this Order, in a cost-effective manner at the direction and under the oversight and supervision of the State of Colorado, and pursuant to the schedules and performance plan set forth in the Record of Decision, as they may be modified by agreement of the parties or further order of this court.

This court shall retain jurisdiction over the parties and this action for purposes of ensuring full compliance with the terms and provisions of this Order. Any party may petition this court regarding matters set forth in this Order by filing the appropriate motion with notice to the opposing party. The moving party's motion shall be heard within thirty days after such filing or on a more expedited basis upon request of either party, or as scheduled by the court.

Either party may petition the court for termination of this court's jurisdiction when all conditions and obligations set forth in this Order have been satisfied. Any non-petitioning party shall have thirty days to lodge any objections to such petition, and the matter of termination shall be heard as expeditiously as a hearing can be scheduled.

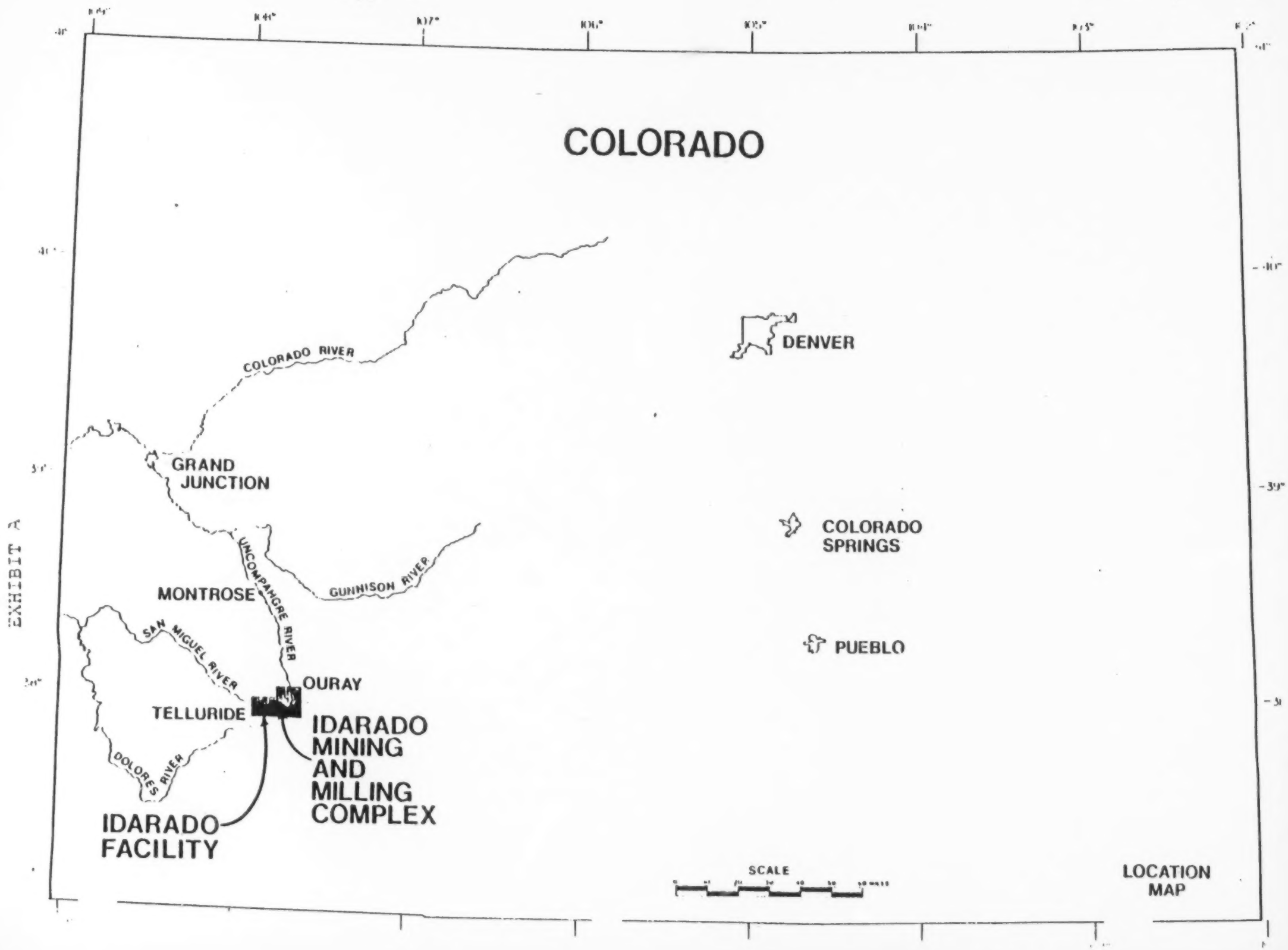
The renewed motion to intervene filed by the Town of Telluride is denied.

The State's motion for reconsideration, or, in the alternative, to permit the Town of Telluride to intervene, is denied.

Dated at Denver, Colorado this 22nd day of February, 1989.

BY THE COURT:

/s/ Jim R. Carrigan
JIM R. CARRIGAN
UNITED STATES
DISTRICT JUDGE


COLORADO
COLORADO RIVER
GRAND JUNCTION
UNCOMPAHGRE RIVER
GUNNISON RIVER
MONTROSE
SAN MIGUEL RIVER
OURAY
TELLURIDE
DOLORES RIVER
IDARADO MINING AND MILLING COMPLEX
IDARADO FACILITY
DENVER
COLORADO SPRINGS
PUEBLO
SCALE
LOCATION MAP
EXHIBIT A

SAN MIGUEL VALLEY - HIGH COUNTRY SOURCES

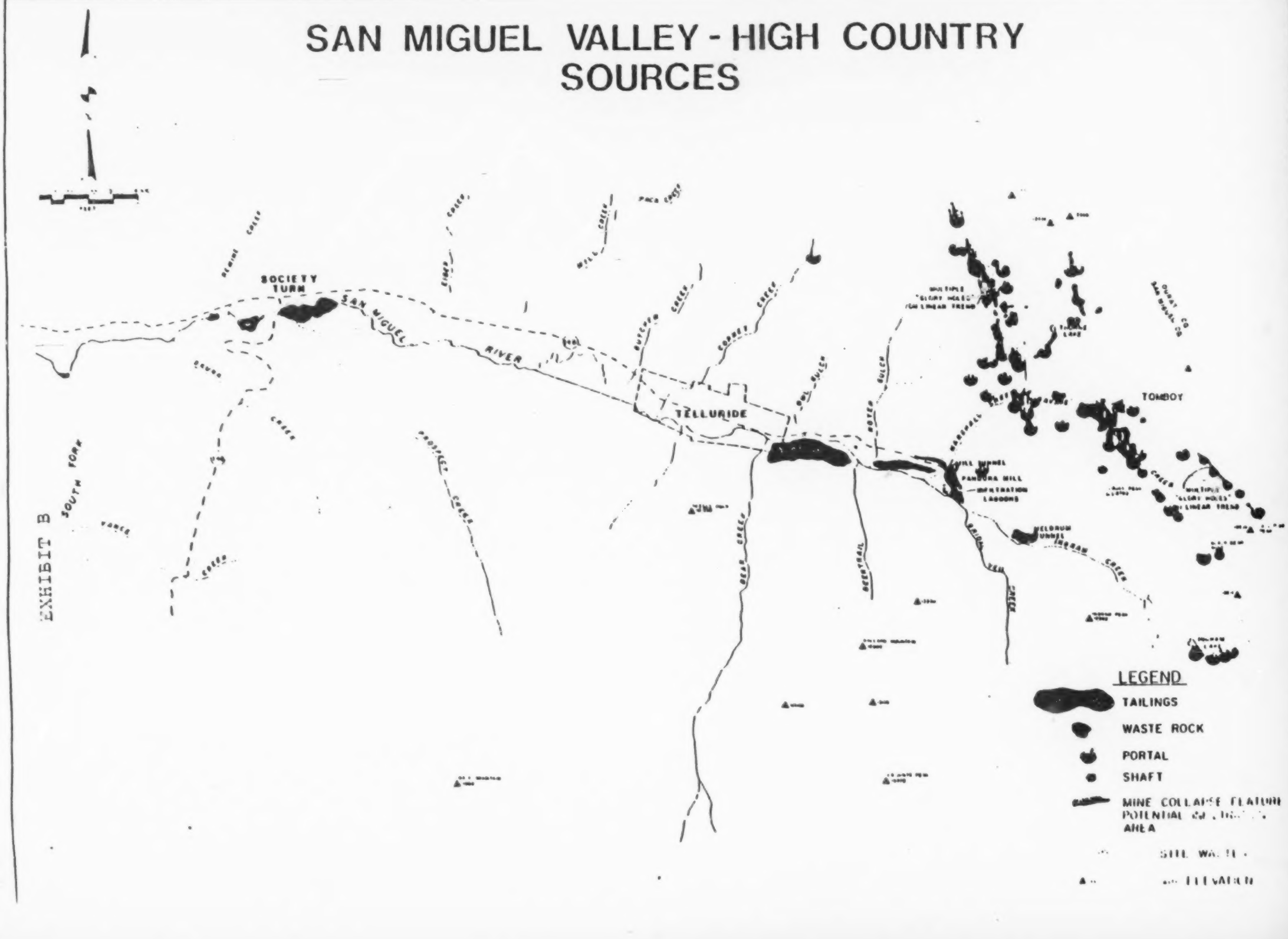


EXHIBIT B

RED MOUNTAIN CREEK VALLEY SOURCES

EXHIBIT C

APPENDIX C

UNITED STATES COURT OF APPEALS
FOR THE TENTH CIRCUIT

STATE OF COLORADO, Plaintiff – Appellee, v. IDARADO MINING COMPANY; NEWMONT SERVICE, LTD., a Delaware corporation and a subsidiary of Newmont Mining Corporation; NEWMONT MINING CORPORATION, Defendants – Appellants and Third Party Plaintiffs, v. BAUMGARTNER OIL COMPANY, also known as Baumgartner Companies; KERR-MCGEE CORP., a Delaware corp.; KENNETH N. GARARD; NATURAL RESOURCES AND LAND DEVELOPMENT CORP., a Delaware corp.; JOSEPH MCCLELLAN; HECLA MINING COMPANY, a Delaware corp.; CAMP BIRD COLORADO, INC., a Colorado corp.; REVENUE-VIRGINIUS MINES CORP., a Colorado corp.; M & J LAUGHERTY; NEW TRUST RUBY MILLING & MINING COMPANY; WALKER MINING & MILLING, INC., a Colorado corp.;	)	No. 89-1077 89-1326 89-1344 90-1129

GAYNO, INC., a Colorado corp.; SAVAGE MINING & OIL COMPANY, INC., a Colorado corp.; FLEET RESOURCES, INC., a Colorado corp.; SILVER MOUNTAIN INDUSTRIES, INC.; SILVER HAT MINING, INC., a Nevada corp.,

Third-party-defendants,

UNITED STATES OF AMERICA,

Amicus Curiae.

ORDER

Filed November 21, 1990

Before HOLLOWAY, Chief Judge, McKAY, LOGAN, SEYMOUR, MOORE, ANDERSON, BALDOCK, BRORBY, and EBEL, Circuit Judges.

This matter comes on for consideration of appellee's petition for rehearing and suggestion for rehearing en banc in the captioned cause.

Upon consideration whereof, the petition for rehearing is denied by the panel that rendered the decision sought to be reheard.

In accordance with Rule 35(b) of the Federal Rules of Appellate Procedure, the suggestion for rehearing en banc was transmitted to all the judges of the court in regular active service. No member of the panel and no judge in regular active service on the court having

requested that the court be polled on rehearing en banc, Rule 35, Federal Rules of Appellate Procedure, the suggestion for rehearing en banc is denied.

Judge Tacha did not participate in consideration or disposition of the suggestion for rehearing en banc.

Entered for the Court

/s/ Robert L. Hoecker
ROBERT L. HOECKER, Clerk

APPENDIX D

PERTINENT PROVISIONS OF THE *COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT, AS AMENDED*

Section 101, 42 U.S.C. § 9601. *Definitions.*

* * *

(24) The terms "remedy" or "remedial action" means [mean] those actions consistent with permanent remedy taken instead of or in addition to removal actions in the event of a release or threatened release of a hazardous substance into the environment, to prevent or minimize the release of hazardous substances so that they do not migrate to cause substantial danger to present or future public health or welfare or the environment. The term includes, but is not limited to, such actions at the location of the release as storage, confinement, perimeter protection using dikes, trenches, or ditches, clay cover, neutralization, cleanup of released hazardous substances and associated contaminated materials, recycling or reuse, diversion, destruction, segregation of reactive wastes, dredging or excavations, repair or replacement of leaking containers, collection of leachate and runoff, onsite treatment or incineration, provision of alternative water supplies, and any monitoring reasonably required to assure that such actions protect the public health and welfare and the environment. The term includes the costs of permanent relocation of residents and businesses and community facilities where the President determines that, alone or in combination with other measures, such relocation is more cost-effective than and environmentally

preferable to the transportation, storage, treatment, destruction, or secure disposition offsite of hazardous substances, or may otherwise be necessary to protect the public health or welfare; the term includes offsite transport and offsite storage, treatment, destruction, or secure disposition of hazardous substances and associated contaminated materials.

Section 106, 42 U.S.C. § 9606. ***Abatement actions.***

(a) Maintenance, jurisdiction, etc. In addition to any other action taken by a State or local government, when the President determines that there may be an imminent and substantial endangerment to the public health or welfare or the environment because of an actual or threatened release of a hazardous substance from a facility, he may require the Attorney General of the United States to secure such relief as may be necessary to abate such danger or threat, and the district court of the United States in the district in which the threat occurs shall have jurisdiction to grant such relief as the public interest and the equities of the case may require. The President may also, after notice to the affected State, take other action under this section including, but not limited to, issuing such orders as may be necessary to protect public health and welfare and the environment.

Section 107, 42 U.S.C. § 9607. ***Liability.***

(a) Covered persons; scope; recoverable costs and damages; interest rate; "comparable maturity" date. Notwithstanding any other provision or rule of law, and

subject only to the defenses set forth in subsection (b) of this section –

(1) the owner and operator of a vessel or a facility,

(2) any person who at the time of disposal of any hazardous substance owned or operated any facility at which such hazardous substances were disposed of,

(3) any person who by contract, agreement, or otherwise arranged for disposal or treatment, or arranged with a transporter for transport for disposal or treatment, of hazardous substances owned or possessed by such person, by any other party or entity, at any facility or incineration vessel owned or operated by another party or entity and containing such hazardous substances, and

(4) any person who accepts or accepted any hazardous substances for transport to disposal or treatment facilities, incineration vessels or sites selected by such person, from which there is a release, or a threatened release which causes the incurrence of response costs, of a hazardous substance, shall be liable for –

(A) all costs of removal or remedial action incurred by the United States Government or a State or an Indian tribe not inconsistent with the national contingency plan;

(B) any other necessary costs of response incurred by any other person consistent with the national contingency plan;

(C) damages for injury to, destruction of, or loss of natural resources, including the reasonable costs of assessing such injury, destruction, or loss resulting from such a release; and

(D) the costs of any health assessment or health effects study carried out under section 104(i) [42 USCS § 9604(i)].

The amounts recoverable in an action under this section shall include interest on the amounts recoverable under subparagraphs (A) through (D). Such interest shall accrue from the later of (i) the date payment of a specified amount is demanded in writing, or (ii) the date of the expenditure concerned. The rate of interest on the outstanding unpaid balance of the amounts recoverable under this section shall be the same rate as is specified for interest on investments of the Hazardous Substance Superfund established under subchapter A of chapter 98 of the Internal Revenue Code of 1954 [26 USCS §§ 9501 et seq.]. For purposes of applying such amendments to interest under this subsection, the term "comparable maturity" shall be determined with reference to the date on which interest accruing under this subsection commences.

* * *

(f) Natural resources liability; designation of public trustees of natural resources. (1) Natural resources liability. In the case of an injury to, destruction of, or loss of natural resources under subparagraph (C) of subsection (a) liability shall be to the United States Government and to any State for natural resources within the State or belonging to, managed by, controlled by, or appertaining to such State and to any Indian tribe for natural resources belonging to, managed by, controlled by, or appertaining to such tribe, or held in trust for the benefit of such tribe, or belonging to a member of such tribe if such resources are subject to a trust restriction on alienation: Provided,

however, That no liability to the United States or State or Indian tribe shall be imposed under subparagraph (C) of subsection (a), where the party sought to be charged has demonstrated that the damages to natural resources complained of were specifically identified as an irreversible and irretrievable commitment of natural resources in an environmental impact statement, or other comparable environment analysis, and the decision to grant a permit or license authorizes such commitment of natural resources, and the facility or project was otherwise operating within the terms of its permit or license, so long as, in the case of damages to an Indian tribe occurring pursuant to a Federal permit or license, the issuance of that permit or license was not inconsistent with the fiduciary duty of the United States with respect to such Indian tribe. The President, or the authorized representative of any State, shall act on behalf of the public as trustee of such natural resources to recover for such damages. Sums recovered by the United States Government as trustee under this subsection shall be retained by the trustee, without further appropriation, for use only to restore, replace, or acquire the equivalent of such natural resources. Sums recovered by a State as trustee under this subsection shall be available for use only to restore, replace, or acquire the equivalent of such natural resources by the State. The measure of damages in any action under subparagraph (C) of subsection (a) shall not be limited by the sums which can be used to restore or replace such resources. There shall be no double recovery under this Act for natural resource damages, including the costs of damage assessment or restoration, rehabilitation, or acquisition for the same release and natural

resource[.] There shall be no recovery under the authority of subparagraph (C) of subsection (a) where such damages and the release of a hazardous substance from which such damages resulted have occurred wholly before the enactment of this Act [enacted Dec. 11, 1980].

Section 113, 42 U.S.C. § 9613. *Civil Proceedings.*

* * *

(g) Period in which action may be brought

* * *

(2) Actions for recovery of costs

An initial action for recovery of the costs referred to in section 9607 of this title must be commenced –

> (A) for a removal action, within 3 years after completion of the removal action, except that such cost recovery action must be brought within 6 years after a determination to grant a waiver under section 9604(c)(1)(C) of this title for continued response action; and
>
> (B) for a remedial action, within 6 years after initiation of physical on-site construction of the remedial action, except that, if the remedial action is initiated within 3 years after the completion of the removal action, costs incurred in the removal action may be recovered in the cost recovery action brought under this subparagraph.

In any such action described in this subsection, the court shall enter a declaratory judgment on liability for response costs or damages that will be binding on any subsequent action or actions to recover further response costs or damages. A subsequent action or actions under

section 9607 of this title for further response costs at the vessel or facility may be maintained at any time during the response action, but must be commenced no later than 3 years after the date of completion of all response action. Except as otherwise provided in this paragraph, an action may be commenced under section 9607 of this title for recovery of costs at any time after such costs have been incurred.

Section 121, 42 U.S.C. § 9621. *Cleanup Standards.*

(a) Selection of remedial action

The President shall select appropriate remedial actions determined to be necessary to be carried out under section 9604 of this title or secured under section 9606 of this title which are in accordance with this section and, to the extent practicable, the national contingency plan, and which provide for cost-effective response. In evaluating the cost effectiveness of proposed alternative remedial actions, the President shall take into account the total short- and long-term costs of such actions, including the costs of operation and maintenance for the entire period during which such activities will be required.

(b) General rules

(1) Remedial actions in which treatment which permanently and significantly reduces the volume, toxicity or mobility of the hazardous substances, pollutants, and contaminants is a principal element, are to be preferred over remedial actions not involving such treatment. The offsite transport and disposal of hazardous substances or

contaminated materials without such treatment should be the least favored alternative remedial action where practicable treatment technologies are available. The President shall conduct an assessment of permanent solutions and alternative treatment technologies or resource recovery technologies that, in whole or in part, will result in a permanent and significant decrease in the toxicity, mobility, or volume of the hazardous substance, pollutant, or contaminant. In making such assessment, the President shall specifically address the long-term effectiveness of various alternatives. In assessing alternative remedial actions, the President shall, at a minimum, take into account:

(A) the long-term uncertainties associated with land disposal;

(B) the goals, objectives, and requirements of the Solid Waste Disposal Act [42 U.S.C. 6901 et seq.];

(C) the persistence, toxicity, mobility, and propensity to bioaccumulate of such hazardous substances and their constituents;

(D) short- and long-term potential for adverse health effects from human exposure;

(E) long-term maintenance costs;

(F) the potential for future remedial action costs if the alternative remedial action in question were to fail; and

(G) the potential threat to human health and the environment associated with excavation, transportation, and redisposal, or containment.

The President shall select a remedial action that is protective of human health and the environment, that is cost

effective, and that utilizes permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable. If the President selects a remedial action not appropriate for a preference under this subsection, the President shall publish an explanation as to why a remedial action involving such reductions was not selected.

(2) The President may select an alternative remedial action meeting the objectives of this subsection whether or not such action has been achieved in practice at any other facility or site that has similar characteristics. In making such a selection, the President may take into account the degree of support for such remedial action by parties interested in such site.

(c) Review

If the President selects a remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site, the President shall review such remedial action no less often than each 5 years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented. In addition, if upon such review it is the judgment of the President that action is appropriate at such site in accordance with section 9604 or 9606 of this title, the President shall take or require such action. The President shall report to the Congress a list of facilities for which such review is required, the results of all such reviews, and any actions taken as a result of such reviews.

(d) Degree of cleanup

(1) Remedial actions selected under this section or otherwise required or agreed to by the President under this chapter shall attain a degree of cleanup of hazardous substances, pollutants, and contaminants released into the environment and of control of further release at a minimum which assures protection of human health and the environment. Such remedial actions shall be relevant and appropriate under the circumstances presented by the release or threatened release of such substance, pollutant, or contaminant.

(2)(A) With respect to any hazardous substance, pollutant or contaminant that will remain onsite, if –

> (i) any standard, requirement, criteria, or limitation under any Federal environmental law, including, but not limited to, the Toxic Substances Control Act [15 U.S.C. 2601 et seq.], the Safe Drinking Water Act [42 U.S.C. 300f et seq.], the Clean Air Act [42 U.S.C. 7401 et seq.], the Clean Water Act [33 U.S.C. 1251 et seq.], the Marine Protection, Research and Sanctuaries Act [33 U.S.C. 1401 et seq.], or the Solid Waste Disposal Act [42 U.S.C. 6901 et seq.]; or
>
> (ii) any promulgated standard, requirement, criteria, or limitation under a State environmental or facility siting law that is more stringent than any Federal standard, requirement, criteria, or limitation, including each such State standard, requirement, criteria, or limitation contained in a program approved, authorized or delegated by the Administrator under a statute cited in subparagraph (A), and that has been identified to the President by the State in a timely manner,

is legally applicable to the hazardous substance or pollutant or contaminant concerned or is relevant and appropriate under the circumstances of the release or threatened release of such hazardous substance or pollutant or contaminant, the remedial action selected under section 9604 of this title or secured under section 9606 of this title shall require, at the completion of the remedial action, a level or standard of control for such hazardous substance or pollutant or contaminant which at least attains such legally applicable or relevant and appropriate standard, requirement, criteria, or limitation. Such remedial action shall require a level or standard of control which at least attains Maximum Contaminant Level Goals established under the Safe Drinking Water Act [42 U.S.C. 300f et seq.] and water quality criteria established under section 304 or 303 of the Clean Water Act [33 U.S.C. 1314, 1313], where such goals or criteria are relevant and appropriate under the circumstances of the release or threatened release.

(B)(i) In determining whether or not any water quality criteria under the Clean Water Act [33 U.S.C. 1251 et seq.] is relevant and appropriate under the circumstances of the release or threatened release, the President shall consider the designated or potential use of the surface or groundwater, the environmental media affected, the purposes for which such criteria were developed, and the latest information available.

(ii) For the purposes of this section, a process for establishing alternate concentration limits to those otherwise applicable for hazardous constituents in groundwater under subparagraph (A) may not be used to establish applicable standards under this paragraph if the

process assumes a point of human exposure beyond the boundary of the facility, as defined at the conclusion of the remedial investigation and feasibility study, except where –

(I) there are known and projected points of entry of such groundwater into surface water; and

(II) on the basis of measurements or projections, there is or will be no statistically significant increase of such constituents from such groundwater in such surface water at the point of entry or at any point where there is reason to believe accumulation of constituents may occur downstream; and

(III) the remedial action includes enforceable measures that will preclude human exposure to the contaminated groundwater at any point between the facility boundary and all known and projected points of entry of such groundwater into surface water

then the assumed point of human exposure may be at such known and projected points of entry.

(C)(i) Clause (ii) of this subparagraph shall be applicable only in cases where, due to the President's selection, in compliance with subsection (b)(1) of this section, of a proposed remedial action which does not permanently and significantly reduce the volume, toxicity, or mobility of hazardous substances, pollutants, or contaminants, the proposed disposition of waste generated by or associated with the remedial action selected by the President is land disposal in a State referred to in clause (ii).

(ii) Except as provided in clauses (iii) and (iv), a State standard, requirement, criteria, or limitation (including any State siting standard or requirement) which could effectively result in the statewide prohibition of land disposal of hazardous substances, pollutants, or contaminants shall not apply.

(iii) Any State standard, requirement, criteria, or limitation referred to in clause (ii) shall apply where each of the following conditions is met:

(I) The State standard, requirement, criteria, or limitation is of general applicability and was adopted by formal means.

(II) The State standard, requirement, criteria, or limitation was adopted on the basis of hydrologic, geologic, or other relevant considerations and was not adopted for the purpose of precluding onsite remedial actions or other land disposal for reasons unrelated to protection of human health and the environment.

(III) The State arranges for, and assures payment of the incremental costs of utilizing, a facility for disposition of the hazardous substances, pollutants, or contaminants concerned.

(iv) Where the remedial action selected by the President does not conform to a State standard and the State has initiated a law suit against the Environmental Protection Agency prior to May 1, 1986, to seek to have the remedial action conform to such standard, the President shall conform the remedial action to the State standard. The State shall assure the availability of an offsite facility for such remedial action.

(3) In the case of any removal or remedial action involving the transfer of any hazardous substance or

pollutant or contaminant offsite, such hazardous substance or pollutant or contaminant shall only be transferred to a facility which is operating in compliance with section 3004 and 3005 of the Solid Waste Disposal Act [42 U.S.C. 6924, 6925] (or, where applicable, in compliance with the Toxic Substances Control Act [15 U.S.C. 2601 et seq.] or other applicable Federal law) and all applicable State requirements. Such substance or pollutant or contaminant may be transferred to a land disposal facility only if the President determines that both of the following requirements are met:

> (A) The unit to which the hazardous substance or pollutant or contaminant is transferred is not releasing any hazardous waste, or constituent thereof, into the groundwater or surface water or soil.
>
> (B) All such releases from other units at the facility are being controlled by a corrective action program approved by the Administrator under subtitle C of the Solid Waste Disposal Act [42 U.S.C. 6921 et seq.].

The President shall notify the owner or operator of such facility of determinations under this paragraph.

(4) The President may select a remedial action meeting the requirements of paragraph (1) that does not attain a level or standard of control at least equivalent to a legally applicable or relevant and appropriate standard, requirement, criteria, or limitation as required by paragraph (2) (including subparagraph (B) thereof), if the President finds that –

> (A) the remedial action selected is only part of a total remedial action that will attain

such level or standard of control when completed;

(B) compliance with such requirement at that facility will result in greater risk to human health and the environment than alternative options;

(C) compliance with such requirements is technically impracticable from an engineering perspective;

(D) the remedial action selected will attain a standard of performance that is equivalent to that required under the otherwise applicable standard, requirement, criteria, or limitation, through use of another method or approach;

(E) with respect to a State standard, requirement, criteria, or limitation, the State has not consistently applied (or demonstrated the intention to consistently apply) the standard, requirement, criteria, or limitation in similar circumstances at other remedial actions within the State; or

(F) in the case of a remedial action to be undertaken solely under section 9604 of this title using the Fund, selection of a remedial action that attains such level or standard of control will not provide a balance between the need for protection of public health and welfare and the environment at the facility under consideration, and the availability of amounts from the Fund to respond to other sites which present or may present a threat to public health or welfare or the environment, taking into consideration the relative immediacy of such threats.

The President shall publish such findings, together with an explanation and appropriate documentation.

(e) Permits and enforcement

(1) No Federal, State, or local permit shall be required for the portion of any removal or remedial action conducted entirely onsite, where such remedial action is selected and carried out in compliance with this section.

(2) A State may enforce any Federal or State standard, requirement, criteria, or limitation to which the remedial action is required to conform under this chapter in the United States district court for the district in which the facility is located. Any consent decree shall require the parties to attempt expeditiously to resolve disagreements concerning implementation of the remedial action informally with the appropriate Federal and State agencies. Where the parties agree, the consent decree may provide for administrative enforcement. Each consent decree shall also contain stipulated penalties for violations of the decree in an amount not to exceed $25,000 per day, which may be enforced by either the President or the State. Such stipulated penalties shall not be construed to impair or affect the authority of the court to order compliance with the specific terms of any such decree.

(f) State involvement

(1) The President shall promulgate regulations providing for substantial and meaningful involvement by each State in initiation, development, and selection of remedial actions to be undertaken in that State. The regulations, at a minimum, shall include each of the following:

(A) State involvement in decisions whether to perform a preliminary assessment and site inspection.

(B) Allocation of responsibility for hazard ranking system scoring.

(C) State concurrence in deleting sites from the National Priorities List.

(D) State participation in the long-term planning process for all remedial sites within the State.

(E) A reasonable opportunity for States to review and comment on each of the following:

(i) The remedial investigation and feasibility study and all data and technical documents leading to its issuance.

(ii) The planned remedial action identified in the remedial investigation and feasibility study.

(iii) The engineering design following selection of the final remedial action.

(iv) Other technical data and reports relating to implementation of the remedy.

(v) Any proposed finding or decision by the President to exercise the authority of subsection (d)(4) of this section.

(F) Notice to the State of negotiations with potentially responsible parties regarding the scope of any response action at a facility in the State and an opportunity to participate in such negotiations and, subject to paragraph (2), be a party to any settlement.

(G) Notice to the State and an opportunity to comment on the President's proposed plan for remedial action as well as on alternative

plans under consideration. The President's proposed decision regarding the selection of remedial action shall be accompanied by a response to the comments submitted by the State, including an explanation regarding any decision under subsection (d)(4) of this section on compliance with promulgated State standards. A copy of such response shall also be provided to the State.

(H) Prompt notice and explanation of each proposed action to the State in which the facility is located.

Prior to the promulgation of such regulations, the President shall provide notice to the State of negotiations with potentially responsible parties regarding the scope of any response action at a facility in the State, and such State may participate in such negotiations and, subject to paragraph (2), any settlements.

(2)(A) This paragraph shall apply to remedial actions secured under section 9606 of this title. At least 30 days prior to the entering of any consent decree, if the President proposes to select a remedial action that does not attain a legally applicable or relevant and appropriate standard, requirement, criteria, or limitation, under the authority of subsection (d)(4) of this section, the President shall provide an opportunity for the State to concur or not concur in such selection. If the State concurs, the State may become a signatory to the consent decree.

(B) If the State does not concur in such selection, and the State desires to have the remedial action conform to such standard, requirement, criteria, or limitation, the State shall intervene in the action under section 9606 of this title before entry of the consent decree, to seek to

have the remedial action so conform. Such intervention shall be a matter of right. The remedial action shall conform to such standard, requirement, criteria, or limitation if the State establishes, on the administrative record, that the finding of the President was not supported by substantial evidence. If the court determines that the remedial action shall conform to such standard, requirement, criteria, or limitation, the remedial action shall be so modified and the State may become a signatory to the decree. If the court determines that the remedial action need not conform to such standard, requirement, criteria, or limitation, and the State pays or assures the payment of the additional costs attributable to meeting such standard, requirement, criteria, or limitation, the remedial action shall be so modified and the State shall become a signatory to the decree.

(C) The President may conclude settlement negotiations with potentially responsible parties without State concurrence.

(3)(A) This paragraph shall apply to remedial actions at facilities owned or operated by a department, agency, or instrumentality of the United States. At least 30 days prior to the publication of the President's final remedial action plan, if the President proposes to select a remedial action that does not attain a legally applicable or relevant and appropriate standard, requirement, criteria, or limitation, under the authority of subsection (d)(4) of this section, the President shall provide an opportunity for the State to concur or not concur in such selection. If the State concurs, or does not act within 30 days, the remedial action may proceed.

(B) If the State does not concur in such selection as provided in subparagraph (A), and desires to have the remedial action conform to such standard, requirement, criteria, or limitation, the State may maintain an action as follows:

(i) If the President has notified the State of selection of such a remedial action, the State may bring an action within 30 days of such notification for the sole purpose of determining whether the finding of the President is supported by substantial evidence. Such action shall be brought in the United States district court for the district in which the facility is located.

(ii) If the State establishes, on the administrative record, that the President's finding is not supported by substantial evidence, the remedial action shall be modified to conform to such standard, requirement, criteria, or limitation.

(iii) If the State fails to establish that the President's finding was not supported by substantial evidence and if the State pays, within 60 days of judgment, the additional costs attributable to meeting such standard, requirement, criteria, or limitation, the remedial action shall be selected to meet such standard, requirement, criteria, or limitation. If the State fails to pay within 60 days, the remedial action selected by the President shall proceed through completion.

(C) Nothing in this section precludes, and the court shall not enjoin, the Federal agency from taking any remedial action unrelated to or not inconsistent with such standard, requirement, criteria, or limitation.

PERTINENT PROVISIONS OF THE *NATIONAL CONTINGENCY PLAN*

40 C.F.R. § 300.68 (1989). *Remedial Action.*

* * *

(i) *Selection of remedy.* (1) The appropriate extent of remedy shall be determined by the lead agency's selection of a cost-effective remedial alternative that effectively mitigates and minimizes threats to and provides adequate protection of public health and welfare and the environment. Except as provided in § 300.68(i)(5), this will require selection of a remedy that attains or exceeds applicable or relevant and appropriate Federal public health and environmental requirements that have been identified for the specific site.

40 C.F.R. § 300.71 (1989). *Other Party Responses.*

(a)(1) Any person may undertake a response action to reduce or eliminate the release or threat of release of hazardous substances, or pollutants or contaminants. Section 107 of CERCLA authorizes persons to recover certain response costs consistent with this Plan from responsible parties.

(2) For purposes of cost recovery under section 107 of CERCLA, except for actions taken pursuant to section 106 of CERCLA or pursuant to preauthorization under § 300.25 of this Plan, a response action will be consistent with the NCP (or for a State or Federal government response, not inconsistent with the NCP), if the person taking the response action:

(i) Where the action is a removal action, acts in circumstances warranting removal and implements removal action consistent with § 300.65.

(ii) Where the action is a remedial action:

(A) Provides for appropriate site investigation and analysis of remedial alternatives as required under § 300.68;

(B) Complies with the provisions of paragraphs (e) through (i) of § 300.68;

(C) Selects a cost-effective response; and

(D) Provides an opportunity for appropriate public comment concerning the selection of a remedial action consistent with paragraph (d) of § 300.67 unless compliance with the legally applicable or relevant and appropriate State and local requirements identified under paragraph (a)(4) of this section provides a substantially equivalent opportunity for public involvement in the choice of remedy.

(3) For the purpose of consistency with §§ 300.65 and 300.68 of this Plan, except for response actions taken pursuant to section 106 of CERCLA or response actions for which reimbursement from the Fund will be sought, any action to be taken by the "lead agency" in § 300.65 or § 300.68 may be taken by the person carrying out the response.

(4) Persons performing response actions that are neither Fund-financed nor pursuant to action under section 106 of CERCLA shall comply with all otherwise legally applicable or relevant and appropriate Federal, State, and local requirements, including permit requirements.

55 Fed. Reg. 8666 (March 8, 1990) (to be codified at 40 C.F.R. Part 300 (1990))

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 300

[FRL-3544-1]

RIN 2050-AA75

National Oil and Hazardous Substances Pollution Contingency Plan

AGENCY: Environmental Protection Agency.

ACTION: Final rule.

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55 Fed. Reg. 8846, 8850-51

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§ 300.430 Remedial investigation/feasibility study and selection of remedy.

* * *

(f) *Selection of remedy* – (1) Remedies selected shall reflect the scope and purpose of the actions being undertaken and how the action relates to long-term, comprehensive response at the site.

(i) The criteria noted in paragraph (e)(9)(iii) of this section are used to select a remedy. These criteria are categorized into three groups.

(A) *Threshold criteria.* Overall protection of human health and the environment and compliance with ARARs

(unless a specific ARAR is waived) are threshold requirements that each alternative must meet in order to be eligible for selection.

(B) *Primary balancing criteria.* The five primary balancing criteria are long-term effectiveness and permanence; reduction of toxicity, mobility, or volume through treatment; short-term effectiveness; implementability; and cost.

(C) *Modifying criteria.* State and community acceptance are modifying criteria that shall be considered in remedy selection.

(ii) The selection of a remedial action is a two-step process and shall proceed in accordance with § 300.515(e). First, the lead agency, in conjunction with the support agency, identifies a preferred alternative and presents it to the public in a proposed plan, for review and comment. Second, the lead agency shall review the public comments and consult with the state (or support agency) in order to determine if the alternative remains the most appropriate remedial action for the site or site problem. The lead agency, as specified in § 300.515(e), makes the final remedy selection decision, which shall be documented in the ROD. Each remedial alternative selected as a Superfund remedy will employ the criteria as indicated in paragraph (f)(1)(i) of this section to make the following determination:

(A) Each remedial action selected shall be protective of human health and the environment.

(B) On-site remedial actions selected in a ROD must attain those ARARs that are identified at the time of ROD

signature or provide grounds for invoking a waiver under § 300.430(f)(1)(ii)(C).

(1) Requirements that are promulgated or modified after ROD signature must be attained (or waived) only when determined to be applicable or relevant and appropriate and necessary to ensure that the remedy is protective of human health and the environment.

(2) Components of the remedy not described in the ROD must attain (or waive) requirements that are identified as applicable or relevant and appropriate at the time the amendment to the ROD or the explanation of significant difference describing the component is signed.

(C) An alternative that does not meet an ARAR under federal environmental or state environmental or facility siting laws may be selected under the following circumstances:

(1) The alternative is an interim measure and will become part of a total remedial action that will attain the applicable or relevant and appropriate federal or state requirement;

(2) Compliance with the requirement will result in greater risk to human health and the environment than other alternatives;

(3) Compliance with the requirement is technically impracticable from an engineering perspective;

(4) The alternative will attain a standard of performance that is equivalent to that required under the otherwise applicable standard, requirement or limitation through use of another method or approach;

(5) With respect to a state requirement, the state has not consistently applied, or demonstrated the intention to consistently apply, the promulgated requirement in similar circumstances at other remedial actions within the state; or

(6) For Fund-financed response actions only, an alternative that attains the ARAR will not provide a balance between the need for protection of human health and the environment at the site and the availability of Fund monies to respond to other sites that may present a threat to human health and the environment.

(D) Each remedial action selected shall be cost-effective, provided that it first satisfies the threshold criteria set forth in § 300.430(f)(1)(ii) (A) and (B). Cost-effectiveness is determined by evaluating the following three of the five balancing criteria noted in § 300.430(f)(1)(i)(B) to determine overall effectiveness: long-term effectiveness and permanence, reduction of toxicity, mobility, or volume through treatment, and short-term effectiveness. Overall effectiveness is then compared to cost to ensure that the remedy is cost-effective. A remedy shall be cost-effective if its costs are proportional to its overall effectiveness.

(E) Each remedial action shall utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable. This requirement shall be fulfilled by selecting the alternative that satisfies paragraph (f)(1)(ii) (A) and (B) of this section and provides the best balance of trade-offs among alternatives in terms of the five primary balancing criteria noted in paragraph (f)(1)(i)(B) of this

section. The balancing shall emphasize long-term effectiveness and reduction of toxicity, mobility, or volume through treatment. The balancing shall also consider the preference for treatment as a principal element and the bias against off-site land disposal of untreated waste. In making the determination under this paragraph, the modifying criteria of state acceptance and community acceptance described in paragraph (f)(1)(i)(C) of this section shall also be considered.